



JPRS Report

Proliferation Issues

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PROLIFERATION ISSUES

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27 September 1991

[This report contains foreign media information on issues related to worldwide proliferation and transfer activities in nuclear, chemical, and biological weapons, including delivery systems and the transfer of weapons-relevant technologies.]

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NAMIBIA

Uranium Oxide Drums Stolen From Rossing

91WP0144A Windhoek TIMES OF NAMIBIA
in English 6 Aug 91 p 1

[Article: "Stolen Uranium; Toxic Danger"—first paragraph is TIMES OF NAMIBIA introduction]

[Text] Three drums of uranium oxide, each weighing about 370kg and worth some R40,000, were stolen from Rossing Uranium Mine this weekend, and there is a strong possibility that the stolen uranium might now be in Windhoek.

According to the company, a warehouse was broken into and the drums were removed on a light pickup vehicle which was also stolen from the mine.

Rossing spokesman Mr. Clive Algar told THE TIMES OF NAMIBIA that the uranium oxide was "worthless" to anyone in Namibia. Locks on gates in the mine perimeter fence were found to have been cut, and the stolen vehicle was later found abandoned near Windhoek.

Mr. Algar warned that although uranium oxide was only mildly radioactive it was chemically highly toxic. He said employees at Rossing mine were well-trained in the handling of this material, and used appropriate safety apparel when handling it.

He said the stolen drums were safe as long as the seals were intact, but that opening the drums by untrained people could be hazardous to their health, or anyone else's who came into contact with the uranium oxide.

Dr. Steve Kessler, General Manager of Rossing Mine, pointed out yesterday that uranium oxide had to go through various processes overseas before it could be used as nuclear fuel. The uranium oxide would first have to be changed into gas and enriched by two percent before being of any use. It was therefore of no value to the thief.

Dr. Kessler urged members of the public with any knowledge of the theft, or the whereabouts of the drums to contact their nearest police station. The steel drums are painted black with stencilled serial numbers and a radioactive warning. A reward is offered for any information which may lead to the recovery of the stolen drums.

The theft of the radioactive material is being investigated by the Namibian Police.

SOUTH AFRICA

AEC Responds to Country's Accession to NPT

91WP0138A Johannesburg FINANCIAL MAIL
in English 16 Aug 91 p 31

[Text] SA's [South Africa's] accession to the terms of the Nuclear Non-Proliferation Treaty (NPT) on July 8 of this year is historic.

Says Minister of Mineral & Energy Affairs George Bartlett: "The isolation from the rest of the world's nuclear activities will gradually disappear, thereby facilitating easier access to import and export markets for nuclear products, services and technology."

Treaty provisions commit members to peaceful uses of nuclear energy only. Article III provides for a negotiated safeguards agreement covering all nuclear materials. Inspections by the International Atomic Energy Agency (IAEA) are mandatory.

Atomic Energy Corp (AEC) Waldo Stumpf notes: "We have been working with the IAEA for many years and are quite familiar with the procedures and have been applying them throughout the ABC." This includes complying with all IAEA regulations on the handling of waste. Three SA nuclear facilities—including Eskom's Koeber—are already inspected routinely by IAEA staff.

Safeguards will now be extended to, for instance, the AEC's uranium enrichment and fuel element fabrication facilities. The treaty provides a maximum of 18 months for the conclusion of a safeguards agreement. This allows for the introduction of material accounting procedures and records that meet IAEA requirements for material verification.

AEC senior manager Nic Ligthelm says: "It is expected the safeguards agreement will be concluded well within the 18-month period."

The IAEA, an agency of the United Nations, was established in 1956, with SA as a founder member. In 1979, however, opposition to apartheid led to rejection of the credentials of SA's delegation to the annual general conference. Since this action, which SA holds as unconstitutional, the country has not taken its seat.

At the 1990 conference a resolution was passed insisting on SA's acceptance of safeguards on all its nuclear facilities. Failure to accede would be met with termination of SA's right and privileges as an IAEA member. Ligthelm says accession to the NPT will help SA to regain its position in the IAEA general conference.

Nuclear sites Opened to International Inspection

MB1691258 Umtata Capital Radio in English
1200 GMT 16 Sep 91

[Text] South Africa has agreed to open its nuclear facilities for international inspection. A spokesman for the International Atomic Agency, Hans Mayer, says South Africa has signed the international inspections agreement. This will allow officials from the agency to begin a full safeguard inventory and to send inspectors.

The agreement takes effect immediately. Mayer says the Koeberg nuclear reactor near Cape Town is already subject to international safeguards, but up until now nuclear fuel enrichment facilities have not been open to inspection. South Africa signed the Nuclear Nonproliferation Treaty in July.

U.S. Company Halts Arms Supply to Pakistan*OW0609081891 Beijing XINHUA in English
0719 GMT 6 Sep 91*

[Text] Islamabad, September 6 (XINHUA)—Tradeways of Virginia, U.S. arms dealer of the Pakistan Ordnance Factory (POF), has stopped its supplies because of the U.S. aid suspension, local daily "THE NEWS" reported today.

The company has informed the POF which wanted to buy mortar guns and related equipment that the U.S. Defense and State departments had advised them not to go ahead with the deal because Pakistan's foreign military sales (FMS) credit for the next fiscal year was highly unlikely, the report said.

Pakistan was to get 91.9 million U.S. dollars from the FMS funds for 1991 but is unable to use the funds because of U.S. aid suspension because of which defense items could not be transferred to Pakistan.

U.S. aid to Pakistan was suspended on October 1, 1990 following President Bush's failure to certify to congress that Pakistan did not have a nuclear device.

The U.S. aid suspension affected badly Pakistan armed forces because many defense projects depended upon aid-package of the United States.

However, local press reported today that a high-level U.S. delegation will visit Pakistan this month for holding talks on nuclear issue and resumption of the U.S. aid.

But a visit by Reginald Bartholomew, U.S. under-secretary of state for international security affairs to Pakistan and India in mid-September was officially announced postponed.

Soviet Coup Puts Nonproliferation Debate on Hold*OW2808145391 Tokyo KYODO in English 1432 GMT
28 Aug 91*

[Excerpt] The Chinese National People's Congress decided not to discuss the issue of signing the Nuclear Nonproliferation Treaty during a session of the Standing Committee, which started Tuesday, following the turmoil in the Soviet Union, sources said.

Premier Li Peng told Japanese Prime Minister Toshiki Kaifu in early August that his country has decided in principle to sign the treaty.

Wan Li, chairman of the congress, canceled a bill Tuesday submitted by the State Council to join the treaty which controls the export of nuclear weapons to other countries, the sources said.

The agenda distributed to members of the congress and journalists in advance specified the debate for joining the treaty.

The sources said the party decided to change the agenda and informed the State Council to do so.

Spent Fuel Reactor Completed in Sichuan*HK0908101991 Beijing CEI Database in English
9 Aug 91*

[Text] Chengdu (CEI)—Chinese construction crew recently completed a new type nuclear reactor which is powered by spent fuel elements in southwest China's Sichuan Province. The reactor is now operational.

The reactor, the first of its kind in China, improves the average fuel burn from 40 percent to 45 percent, saving over two million yuan annually in fuel costs.

The new pool-type reactor, which was designed by the China Nuclear Power Research and designing institute, has a five megawatt power rating. The reactor's maximum thermal-neutron flux reaches 80,000 billion neutrons per square centimeter second, and the fast-neutron flux 140,000 billion neutrons per square centimeter second, thus ranking third amongst nuclear reactors in China.

The reactor utilizes the fuel elements previously used at a 125-megawatt mother reactor—China's largest nuclear reactor which was constructed in the 1980s. In addition, the new reactor is equipped with a fuel test system which is unprecedented in china and rare in the world.

The high economy reactor will replace the high-flux mother reactor in areas such as radioisotope research and production, neutron activation analysis, and material irradiation.

Pakistan To Obtain Thermal Power Plants*OW0909162791 Beijing XINHUA in English
1553 GMT 9 Sep 91*

[Text] Islamabad, September 9 (XINHUA)—Pakistan will obtain from China two thermal power plants of 210 megawatts (mw) each as was agreed upon today at the end of a three-day session here of the Pakistan-China Joint Economic Committee.

The agreed minutes of the session were signed today by Pakistan Finance Minister Sartaj Aziz and Chinese Vice-Minister for Foreign Economic Relations and Trade Gu Yongjiang.

After the signing of the agreed minutes, Sartaj Aziz said the session was "fruitful and productive" as both sides reached agreement on a number of specific areas.

According to an official press release issued after the meeting, the two sides discussed in detail prospects of cooperation in the fields of commerce, trade, industry and mineral development.

The two sides agreed on the importance of expanding trade between the two countries and the Chinese side

also agreed to take measures to increase its imports from Pakistan to reduce the trading imbalance.

Both sides finalized arrangements for China's participation in a large number of projects in Pakistan including a 24 mw power station and agreed on the need to diversify the production capacity of the heavy machinery complex built with Chinese aid.

It was also agreed that a delegation from Pakistan will visit China soon to finalize necessary arrangements for the thermal power plants.

NPC to Ratify Nuclear Nonproliferation Treaty

*HK2508091491 Hong Kong WEN WEI PO in Chinese
25 Aug 91 p 1*

[By WEN WEI PO correspondent Zhang Hong (1728 4767): "Issue of Joining Nuclear Nonproliferation Treaty Will Be Discussed by National People's Congress [NPC] as Soon as a Motion Is Received From State Council"]

[Text] Beijing, 24 Aug (WEN WEI PO)—Zhou Chengkui, National People's Congress [NPC] General Office spokesman, mentioned the issue of China's joining the "Nuclear Nonproliferation Treaty" at a news conference today.

A reporter asked when the NPC will begin to deliberate and ratify the "Nuclear Nonproliferation Treaty," and Zhou Chengkui replied: According to our laws, the State Council should first submit a motion to the NPC Standing Committee on this kind of international treaty. The State Council has not yet submitted the relevant motion, so the NPC Standing Committee cannot begin to deliberate on it. I think it will be discussed by the NPC as soon as the motion is received from the State Council.

Daya Bay Nuclear Plant Faces Two-Month Delay

*WA1908121091 Hong Kong SUNDAY STANDARD
in English 23 Jun 91 p 4*

[Text] Daya Bay nuclear power station will come on stream two months late because of faults detected in thousands of pipes.

Defects were found in 13,000 of the pipes designed to carry radioactive water when they failed to fit together at the plant.

Daya Bay's builder, the Guangdong Nuclear Power Joint Venture Company, promised that the plant would be safe.

The company plans to send 5,000 of the pipes back to the manufacturers in England and France.

The others will be redesigned on site in Guangdong.

But because of the delay, the station will start generating only in December 1992, two months behind schedule.

Company officials insist that they have stringently supervised quality at the site, just 70 kilometers from Central in Hongkong.

In February they set up an operations group "with a view to strengthening overall quality management" as the plant moved towards commissioning, the management told reporters invited to tour the plant yesterday.

Two internal audits conducted since December last year discovered "no significant quality issues".

Since April 1989 station operators and maintenance, safety, and management staff have been sent to France for training. They have since returned to start work at Daya Bay.

Concern over the plant has grown since its construction was announced in the mid 1980's.

In September 1987 the project was temporarily shut down after workers building the concrete foundation left out 316 of the 576 steel reinforcing rods.

Indigenous Guided Missiles Reach High Standards

*OW0808060191 Beijing Central People's Radio
Network in Mandarin 2130 GMT 7 Aug 91*

[From the "News and Press Review" program]

[Text] China's self-designed and self-manufactured guided missiles comprise many systems and various models. They include shore-to-ship, ship-to-ship, and air-to-ship missiles. All these guided missiles have attained high technological standards in terms of performance, power of penetration, precision, and percentage of hits. At the same time, large numbers of technological and specialized personnel have been trained in related fields.

Nuclear Reactor for Heat, Electricity Developed

*HK1209004791 Beijing CEI Database in English
11 Sep 91*

[Text] Beijing (CEI)—Scientists working with the Qinghua University in Beijing have succeeded in developing a five-megawatt low-temperature nuclear reactor that supplies both heat and electricity.

Appraising the development here on September 6, experts said that the achievement was a technical basis for building large commercial heat and electricity supplying nuclear reactors. If applied to the 200-megawatt lower-temperature heat-supply reactor soon to be built in China, the achievement will raise the reactor's economic benefits by 20 to 30 percent, they noted.

It is learned that the scientists at the university are also studying the use of low-temperature nuclear heat-supplying reactors to desalinate sea water.

Nuclear Power Safety Standards Reached

*HK2108080091 Hong Kong ZHONGGUO TONGXUN
SHE in Chinese 0616 GMT 16 Aug 91*

[Text] Beijing, 16 Aug (ZHONGGUO TONGXUN SHE)—The probability safety assessment (PSA) technique for nuclear power stations in China has reached international standards.

There are two teams engaged in PSA work in China, one in the south and the other in the north. The northern team, jointly set up by Qinghua University, No. 2 research institute of China National Nuclear Industry Corporation, and Chinese Research Institute of Atomic Energy Sciences, has accomplished, under the leadership of the State Nuclear Safety Administration, a project "PSA for Guangdong nuclear power station" in a five-year endeavor. The State Science and Technology Commission organized experts to appraise this project and

their conclusion says: "On the whole, it has reached international PSA standards and shows originality in some analysis techniques."

PSA is a new technique widely used in such fields as the nuclear industry, aeronautics, astronautics, and the electronic industry in some developed countries. The PSA reports available from other countries indicate that only a small number of countries around the world, such as the United States, Germany, and Britain, have published reports on full PSA processes including first, second, and third-stage analyses.

Today, a complete PSA subject has been established in China, which contains methodology, computer programs, and a database which is ready for use. A contingent of technicians who have mastered theories and methods of computation and analysis, and are experienced in PSA work has been brought up.

AUSTRALIA

USSR Republics Urged To Sign Nuclear Pact

BK0409070491 Melbourne Radio Australia in English
0500 GMT 4 Sep 91

[Text] Australia says the republics in the Soviet Union which achieved genuine independence should sign the nuclear nonproliferation treaty. The foreign minister, Senator Gareth Evans, said that questions are being raised over the command and control of nuclear weapons in the Soviet Union.

He told the Senate that there were about 27,000 nuclear warheads in the Soviet Union. Senator Evans said three quarters of the strategic weapons were held in the Russian Republic but tactical nuclear warheads were deployed in most of the republics.

[Begin Evans recording] The emergence of a new structure in the Soviet Union of uncertain dimensions at this stage, and with uncertain authorities so far as military matters are concerned, does of course raise questions as to where the command and control for these warheads will be located. Certainly it is our understanding at the moment that the central Soviet Union military authorities are presently maintaining very tight control of all the country's nuclear weapons. Moreover, it is the case that most republics, including the Ukraine and Kazakhstan, have already publicly declared that they have no intention of becoming nuclear weapons states. [end recording]

INDONESIA

Energy Minister Urges Use of Nuclear Power

BK2808101191 Jakarta ANTARA in English 0908 GMT
28 Aug 91

[Text] Jakarta, Aug 28 (ANTARA-ECOANA)—The use of nuclear energy to generate electricity is inevitable especially because Indonesia's oil/gas reserve is getting limited, Mines and Energy Minister Ginanjar Kartasasmita said here Wednesday.

Before a dialog forum organized by the KNPI [Indonesian National Youths Committee] Youth Organizations and the National Atomic Energy Board (BATAN), he further said that the construction of a nuclear power plant should be prepared as of today.

The government already possessed a political will to study the feasibility of constructing such a plant, he said adding that "Now we will only have to wait for the results of the feasibility study."

Such a study, according to Ginanjar, hopefully will be completed in about four years.

Indonesia's first nuclear power plant, following the completion of the study is expected to be operational by the year 2005, he said adding that compared with power

plants generated with other energy sources, such a plant would be more environmentally clean and efficient.

On concerns over the danger of a nuclear power plant, Ginanjar said accidents like that in Chernobyl (Soviet Union) several years ago is mainly caused by the human factor, not because there was something wrong with the technology.

Of the 426 nuclear reactors all over the world, only two suffered from serious accident so far, the first was in Chernobyl where 28 people were killed and the other was in the Three Mile Island (the U.S.) for which no casualties were reported.

Ginanjar said that the two accidents would enable Indonesia to carry out better preparations in setting up a nuclear power plant. He, however, also conceded that the use of nuclear energy still faced some basic problems including decommissioning or waste processing cost which totalled around 50 million U.S. dollars.

Moreover, he went on, many developing countries also consider the initial investment for constructing a nuclear power plant too high.

Nevertheless, many countries now tend to turn to such a plant including France where 75 percent of its electricity generating plants are nuclear-powered while Japan as well as South Korea respectively 30 percent, he said.

JAPAN

Four Arrested for Selling Missile Parts to Iran

OW2808091391 Tokyo KYODO in English 0835 GMT
28 Aug 91

[Text] Tokyo, Aug 28 KYODO—Police on Wednesday arrested four top officials of an aerospace equipment manufacturer for smuggling air-to-air missile parts to Iran in violation of Japan's arms embargo policy.

Executives arrested were Yukio Kaito, 63, senior adviser and former president of Japan Aviation Electronics Industry Ltd. (JAE), Keiichi Fukuizumi, 64, a senior managing director, Yoshiharu Fukunaga, 58, a director, and Hironobu Takahashi, head of the company's aircraft division.

This is the first case in Japan in which police are seeking criminal charges against top management officials of a leading Japanese manufacturing company for the illegal export of weapons parts.

JAE is a major aerospace and weapon parts manufacturer, and 50.2 percent of its stock is owned by NEC Corp., a major electronics maker. Police said they will also send to prosecutors an investigative report on four more JAE officials involved in the alleged illegal exports.

Police suspect the four arrested officials, who earlier admitted to the sales, broke Japan's foreign exchange and foreign trade control and tariff laws by exporting a

total of 3,000 flywheels for use in U.S.-designed Sidewinder air-to-air missiles for the Iranian Air Force's mainstay jet fighter, the U.S.-made F-4 Phantom.

Flywheels are set at the rear of the missile's four main fuselage fins, and are vital for the accuracy of the heat-seeking missiles in targeting enemy aircraft, as they stabilize the missile's flight.

Police said JAE made a profit of 35 million yen from the sales of 1,357 flywheels by exporting them without obtaining the approval of the Ministry of International Trade and Industry (MITI).

At the time of the exports, Iran was at war with Iraq and was desperately trying to obtain missiles and other weapons parts due to the trade embargo imposed by the U.S. and European nations after American Embassy officials were taken hostage in Tehran in 1979.

Police raided JAE's headquarters in Tokyo and five other places for evidence.

On July 5, the firm's senior managing director, Koichi Kondo, told a news conference the company's top management were unaware of the sales, and the exports were "the acts of a group of limited number of company employees."

Police investigators said JAE imported 1,357 damaged flywheels from the Iranian Air Force since May, 1988, via a Singaporean subsidiary of a U.S. arms dealer, Aero Systems Inc. of Florida.

JAE repaired the flywheels and reexported them to Iran through Aero Systems, the investigators said.

Japan bans the export of weapons and their components. In 1967, the cabinet introduced a ban on the export of arms to the then Communist bloc, countries subject to U.N. weapons trade embargoes, and areas of conflict. After 1976, the Japanese weapons embargo was increased to cover all countries, but technology exports to the United States were permitted.

Meanwhile, U.S. federal investigators have contacted the Japanese Government and police seeking investigative cooperation in a bid to find evidence to prosecute Aero Systems Inc. On suspicion of violating the U.S. Export Administration Act and the Arms Export Control Act.

The federal investigators are seeking information and documents used as evidence in the JAE case and plan to provide immunity from prosecution under U.S. federal laws if the company agrees to provide evidence, the police said.

KYODO news service obtained a U.S. district court document that revealed JAE was one of several international military suppliers approached and used by Aero Systems Inc. of Florida in providing weapons parts to the Iranian Air Force.

Firm, Four Executives Indicted in Missile Case

OW1309052091 Tokyo KYODO in English 0505 GMT 13 Sep 91

[Text] Tokyo, Sept. 13 KYODO—Public prosecutors on Friday indicted Japan Aviation Electronics Industry (JAE), a Tokyo-based aerospace equipment manufacturer, and four executives of the company on charges of illegally exporting air-to-air missile parts to Iran during the Iran-Iraq war.

The indicted executives are Yukio Kaito, 63, the firm's senior adviser and former president; Keiichi Fukuizumi, 64, a senior managing director; Yoshiharu Fukunaga, 58, a director; and Hironobu Takahashi, head of the company's aircraft division.

The Tokyo District Public Prosecutors Office charged the firm and the four executives with violating Japan's Foreign Exchange and Foreign Trade Control Law and tariff law over a period of 18 months beginning in May 1988 by exporting 1,357 flywheels for use in U.S.-designed Sidewinder air-to-air missiles for the Iranian Air Force's mainstay jet fighter, the U.S.-made F-4 Phantom.

JAE made a profit of 35 million yen from exporting flywheels without obtaining the approval of the Ministry of International Trade and Industry (MITI), prosecutors said.

Flywheels function to stabilize the missile's flight and are vital for the accuracy of the heat-seeking missiles in targeting enemy aircraft.

JAE imported 1,357 damaged flywheels from the Iranian Air Force from May 1988, via a Singaporean subsidiary of a U.S. arms dealer, Aero Systems Inc. of Florida, the prosecutors said.

The Japanese firm repaired the flywheels and reexported them to Iran through Aero Systems, the prosecutors added.

Since 1967, Japan has maintained a policy of prohibiting export of arms to the communist bloc, countries subject to UN weapons trade embargoes, and areas of conflict.

The Metropolitan Police Department will dispatch several investigators to the United States next week to probe the case.

A U.S. federal grand jury earlier this month indicted JAE for allegedly selling 7 million dollars worth of U.S.-designed gyroscopes and accelerometers to Iran in violation of a U.S. embargo on weapon sales to Tehran.

The indictment alleged that JAE conspired with Aero Systems to sell illegally to Iran from February 1984 to October 1987 critical navigational components for F-4 Phantom fighters.

The grand jury also indicted three JAE employees, Aero Systems and its subsidiary in Singapore, Aero Systems

Pte, its Hong Kong Unit Hierax Co., and two senior Aero Systems Pte and Hierax executives.

Aero Systems is a Miami-based company involved in the sales and servicing of aircraft equipment.

Lithuanian Nuclear Power Plant Operators Arrive
OW1009141391 Tokyo KYODO in English 1223 GMT 10 Sep 91

[Text] Fukushima, Sept. 10 KYODO—Operators of a Lithuanian nuclear power plant visited the Tokyo Electric Power Co.'s plant on Tuesday to exchange information on emergency procedures at nuclear plants.

Five officials of the Ignalina nuclear power plant will study emergency operations at the No. 1 Fukushima plant until Friday, said officials of the Japanese company.

The visit by the Lithuanian officials is taking place under the auspices of the World Association of Nuclear Operators (WANO).

The organization, founded three years after the 1986 Chernobyl nuclear power plant disaster, facilitates exchanges of information among the world's nuclear power plant operators in order to prevent similar calamities.

The Ignalina plant is the only nuclear power facility among the three newly independent Baltic states of Estonia, Latvia, and Lithuania.

Defector Reveals Underground Nuclear Facility
OW1309141391 Tokyo NHK General Television Network in Japanese 1000 GMT 13 Sep 91

[Text] A North Korean diplomat who defected to South Korea last March said today in Seoul that there are at least two nuclear facilities in North Korea.

Mr. Ko Yong-hwan, 38-year-old diplomat who used to serve as the first secretary at the North Korean Embassy in Congo, defected to South Korea last March. At a news conference in Seoul, Mr. Ko said that there is a uranium mine at (Pingshang), south of Pyongyang. He also said that there is an underground nuclear facility at (Bakshong) which is different from another facility whose existence is known to Western nations.

Mr. Ko is the first North Korean diplomat who has defected to South Korea. Asked why his news conference today was held on the eve of North and South Korea's application for UN membership, the South Korean Government said that it was determined with due consideration for the safety of his family members he left in Africa.

SOUTH KOREA

Readiness To Share Nuclear Technology With North

SK1709062191 Seoul YONHAP in English 0554 GMT 17 Sep 91

[Text] Vienna, Sept. 17 (YONHAP)—South Korean Science and Technology Minister Kim Chin-hyon said Tuesday his country was willing to transfer nuclear technology to North Korea, for all the North's negative attitude toward outside inspection of its nuclear facilities.

In a keynote speech to the 35th general meeting of the International Atomic Energy Agency [IAEA], Kim said his government was ready to share its nuclear technology and experience, which it had acquired over the past 20 years, with North Korea.

The minister said his country could offer technologies relating to the construction and operation of atomic power plants and safeguards of nuclear materials.

Expressing regrets about North Korea's delaying of the signing of the IAEA nuclear safeguards accord, Kim called on the North to keep its word as promised with the IAEA and ratify it at an early date.

IAEA should contribute to facilitating transfer of nuclear technology from the industrialized countries to the developing countries, he said, adding South Korea would positively step up cooperation with industrializing countries in the field.

Citing President No Tae-u's declaration in April that South Korea would use atomic energy only for peaceful means, Kim said his country would sincerely implement safeguards in observance of the Nuclear Non-Proliferation Treaty (NPT).

South Korea joined the NPT in April 1975 and signed the IAEA safeguards accord in October the same year. North Korea joined the NPT in December 1985 but has yet to sign the safeguards accord. An NPT signatory is obliged to ink the IAEA accord within 18 months of joining.

Forced Inspection of North Nuclear Areas Sought

SK1609134291 Seoul YONHAP in English 1302 GMT 16 Sep 91

[Text] Vienna, Sept. 16 (YONHAP)—South Korean Science and Technology Minister Kim Chin-hyon said Monday that his government would make concerted efforts with foreign countries to settle a device in the International Atomic Energy Agency (IAEA) which will help force international inspection on North Korean nuclear installations.

Kim, here to attend the 35th general meeting of the IAEA, told Korean reporters that the IAEA should have a power to conduct a forcible inspection on nuclear

installations in North Korea despite her protest against alleged infringement by the IAEA on her sovereignty.

Kim said South Korea would join hands with the United States, the Soviet Union, Japan and other leading IAEA member countries to accomplish that effort.

He observed that the ongoing normalization talks between Tokyo and Pyongyang and North Korea's economic conditions would act as important variables in settling the issue of North Korea's acceptance of international inspection.

The minister said the South Korean Government would open its representative office here at the end of this year with a view to promoting cooperations with foreign countries in the atomic energy field.

Kim is to deliver a keynote speech Tuesday at the IAEA general session.

North's Uranium-Enrichment Know-How Doubted
SK3008040291 Seoul THE KOREA HERALD
in English 30 Aug 91 p 1

[Text] North Korea certainly does not have the money, technological know-how, and electricity needed to develop and operate a uranium-enriching facility, a government official said yesterday asking not to be named.

This comment came after a recent British defense magazine, Jane's Intelligence Review, report that North Korea has completed a facility that can produce enriched weapons-grade uranium, in Pyongsan, south of Pyongyang.

"The facilities in Pyongsan, completed in 1984, are designed to dress and smelt uranium ores as North Korea began to exploit its 4-million-ton reserves," said the government official.

He said that the technological level of the facilities does not reach the rudimentary stages of producing nuclear fuel.

There is no need to attach any significance to the Yongbyon nuclear facilities' air cooling system, which is of the kind that Communist countries have been using to save construction costs, he said.

For example, the infamous Chernobyl nuclear plant, which gripped the world with nuclear hysteria when it exploded in April 1986, had the same air cooling system, the official said.

PHILIPPINES

Nuclear Storage Capacity Viewed

HK0909054591 Quezon City MALAYA in English
9 Sep 91 pp 1, 2

[By Ellen Tordesillas]

[Text] Subic Naval Base has a storage capacity for 360 nuclear weapons and 166 nuclear weapons were stored there at the height of the Vietnam War in the early '70s a source privy to the documents of past bases negotiations said yesterday.

The source said that in 1978, former Executive Secretary Alejandro Melchor Jr., who was appointed by then President Marcos as special envoy in connection with the bases issue, submitted a report that "Subic has a storage capacity for 360 nuclear weapons."

The report also said "some 166 nuclear weapons were stored at Subic at the height of the Vietnam War."

The source said the Melchor report was based on a declassified report on the plans of the U.S. Navy up to the year 2010.

The U.S. government maintains a "neither confirm nor deny" policy on the presence of nuclear weapons in any of their military facilities.

The 1987 Constitution provides that "The Philippines, consistent with the national interest, adopts and pursues a policy of freedom from nuclear weapons in its territory."

The proposed RP [Republic of the Philippines]-U.S. Treaty of Friendship, Cooperation and Security, which gives the U.S. at least 10 more years to stay in Subic in exchange for \$203 million a year, allows storage or installation of nuclear or non-conventional weapons in Philippine territory if the Philippine government gives its consent.

The treaty also states that transits, overflights or visits of U.S. aircraft or ships in Philippine territory are not considered storage or installation.

In last week's Senate hearing on the treaty, defense officials said the U.S. never asked permission to store nuclear weapons in the bases.

Defense Undersecretary Feliciano Gacis, a member of the Philippine panel, said the government does not have the capability to detect the presence of nuclear weapons in U.S. facilities. "Even if we know a naval vessel seeking a transit permit is nuclear-armed but you know it is man-of-war, you don't board it because such would be an act of hostility."

YUGOSLAVIA

Retired General Says Croatia Has Stinger Missiles

AU0909111091 Pristina TVP Sat TV in Serbo-Croatian
1730 GMT 8 Sep 91

[Interview with Radosav Sekulic, director of the Federal Customs Administration, by Dragan Jokic; place and date not given—recorded]

[Text] [Jokic] Respected viewers, several federal institutions recently received a letter signed by a retired general in which he says, among other things, the following:

To the Director of the Federal Customs Administration:

Respected Comrade Director,

Ten days ago I was informed that the Croatian War Ministry purchased through an Austrian firm the Stinger surface-to-surface and surface-to-air missiles. We are talking about a large number of them, several thousand of them. The effectiveness and range of these missiles are great. The capital city of Yugoslavia could be hit from Ilok, Tovarnik, or Adasevci.

These missiles could destroy hundreds of our tanks, which will be returning from Slovenia on railroad cars, or our tanks on roads and barracks in Croatia. Many of our aircraft would be brought down from our blue sky with these missiles fired from silos, church towers, and skyscrapers.

We went to find the director of the Federal Customs Administration to ask him how true this was.

[Sekulic] One could hardly say that this is not true. Missiles are indeed being fired. These English-produced

Stinger missiles are very famous. They were very popular in the Middle East, quite expensive, about \$10,000 apiece.

We have information about the bulk of arms shipments, even about the smallest shipments—small arms and rockets that can be carried in bags or pockets.

[Jokic] So, you can trace one rocket but not a thousand Stinger missiles.

[Sekulic] I have already stated once before that 90 percent, or even over 90 percent, of all kinds of arms that enter our country are more or less uncovered.

[Jokic] It appears that the enormous shipment of arms in Bar has been forgotten. What happened to it? Did anybody claim it?

[Sekulic] Somebody forgot it. The first claims [dispozicija] should have been made by 15 August, but nothing happened.

[Jokic] Nobody has been in touch?

[Sekulic] Nobody has been in touch. Everything is in a safe place, well secured, well protected.

[Jokic] No member of the [Croatian] Ministry of Internal Affairs can come as [words indistinct] Hrvatska Dubava.

[Sekulic] No, no. This is stored in a modern way and secured, and there is no risk whatsoever.

[Jokic] What amount of weapons are we talking about?

[Sekulic] About 20,000 tons. It is difficult to say exactly how much. As you know, there were stories that these arms were meant for an army of 100,000 men.

[Jokic] If no one comes to claim this shipment, what will happen to it?

[Sekulic] According to the customs regulations, the shipment is stored, and if it is not claimed within a certain period of time, we apply the customs law on the breach of regulations. It will probably be confiscated, auctioned, or something else. We expect somebody to claim it.

ARGENTINA**Construction of Heavy Water Plant To Continue***91WP0143A Buenos Aires LA PRENSA in Spanish
19 Aug 91 p 8*

[Text] National Commission for Atomic Energy (CNEA) has reported that work continues on the Heavy Water Industrial Plant (PIAP) that is being built in Arroyito, Neuquen. It is estimated that commercial operations will begin by the second half of 1992.

The plant, with a production capacity of 200 tons of heavy water, was planned to supply this product to the Argentine nuclear power plants that use natural uranium.

The CNEA declared that the capacity to produce heavy water in the country "is an indispensable step toward full mastery of the fuel cycle in the Argentine Republic and total autonomy in the generation of nuclear power."

It added that in 1980 it signed a contract with the Swiss firm Sulzer Brothers Limited, but that due to "budgetary difficulties" the pact "has suffered serious delays."

The commission pointed out that the contract was rescinded and new guidelines were agreed upon with the subcontractors on the project. At the same time, the Neuquen Engineering Services Enterprise (ENSI) has been formed to complete the projects.

It indicated that the immediate objective of the heavy water plant, when it comes on line, will be to supply the initial charge for the Atucha II nuclear power plant.

The CNEA stated that tests and trials are now under way, and the various service and processing units of the plant have begun operating. The payroll will be about 400 employees, including professionals and highly skilled technicians.

Rehabilitation of Atomic Reactor Announced*91WP0143B Buenos Aires LA PRENSA in Spanish
27 Aug 91 p 1*

[Text] The chairman of the board of directors of the National Commission for Atomic Energy (CNEA), Manuel Mondino, stated that the Argentine One reactor, installed in the Constituyentes nuclear power plant, is a "symbolic instrument" because it represents the effort and ability of Argentine technicians.

This reactor, built entirely with Argentine materials by Argentine technicians, has a potential capacity of three megawatts. It began operating in 1958, and was replaced by the RA-3 in September 1983. Now it is on line once again, and will be used to research the mechanical properties of materials.

After the ceremony, held at the Constituyentes nuclear power plant at the intersection of General Paz and Constituyentes Avenues, Mondino indicated that pacts have been signed with the government of La Rioja to

install in that province a cobalt therapy machine and to mine uranium in the Los Colorados area. "These developments prove that activity is picking up," he explained.

With regard to Atucha 2, he said that "it is a public works project of interest to the country. Its 750 megawatts are essential for our energy supply, and we must get it in operation as soon as possible. CNEA is making a major effort to apply specific resources to this project. Without power, there is no economy," he declared.

Mondino stated that the reactor is the "fundamental milestone in our entire nuclear development. We were the first in Latin America to have a reactor; we developed technology that makes it possible to run powerful reactors, to manage them, maintain them, and provide efficient service to society. Nuclear power is the element that can really bring quality of life to the population."

Economy Minister on Nuclear Development*PY0609034891 Buenos Aires TELAM in Spanish
0110 GMT 5 Sep 91*

[Article by special correspondent]

[Excerpt] Cocoyoc, (Mexico), 5 Sep (TELAM)—The economy minister today stated that Argentina will begin to sell more than 50 percent of its shares [not further specified] late in 1992, and that it will also move forward in the development of nuclear technology.

During a news conference lasting more than one hour, Cavallo stated that the privatization of the Argentine nuclear energy system is still being analyzed.

He also announced that "the Armed Forces will be reorganized and modernized." Also attending the news conference were Economy Ministry adviser Eduardo Villalba, and Raul Nunez, counselor of the Argentine Embassy in Mexico. [passage omitted]

Agreement Prohibits Chemical, Biological Weapons*PY0509232891 Buenos Aires TELAM in Spanish
2139 GMT 5 Sep 91*

[Text] Mendoza, 5 Sep (TELAM)—The Governments of Argentina, Chile, and Brazil expressed today their "full commitment" to cease to develop, produce, or purchase, directly or indirectly, chemical or biological weapons in order to "strengthen the security of all states" and "to consolidate the region as a peace zone."

Through the agreement called "Mendoza Declaration" the three governments expressed their "desire to contribute decisively to the success" of the third conference called to review the convention that prohibits biological weapons. They also expressed their desire "to study ways to strengthen the verification mechanisms."

They reaffirmed their "right to use all specific applications of chemistry and biology for economic and technological development and for the wellbeing of the people."

The "Mendoza Declaration" was signed by Foreign Ministers Guido di Tella of Argentina, Francisco Rezek of Brazil, and Enrique Silva Cimma of Chile during a ceremony at the Flag of the Andes Hall of Mendoza Government House.

The foreign ministers said that they are convinced that the application of the convention should create among the states "a framework of mutual confidence that will allow a substantial increase of international cooperation in the exchange of chemical substances, equipment, and related technologies."

The foreign ministers also expressed in the eight-point declaration their willingness "to closely cooperate" toward a multilateral convention that prohibits chemical weapons, and "to sign it as founding members."

They also expressed their willingness to establish in their respective countries "appropriate control mechanisms on substances defined as precursors for chemical war."

UN Secretary General Javier Perez de Cuellar said that the signing of the "Mendoza Declaration" is "a concrete step" toward peace and international security. He emphasized the commitments made by the Argentine, Chilean, and Brazilian Governments "to strengthen international harmony and to create a better world."

He stated that along with the Tlatelolco Treaty the declaration signed today "will contribute to keep Latin America and the Caribbean free of weapons of mass destruction and will become an important measure to encourage confidence among the states of the region."

He said that the trilateral document "will give valuable impulse" to the current negotiations in Geneva and he expressed his hope that the declaration "will inspire similar actions in other regions and subregions of the world."

BRAZIL

Official Views Nuclear Accord With Argentina

PY0709141491 Rio de Janeiro O GLOBO in Portuguese 6 Sep 91 p 4

[Text] Brasilia—The safeguard agreement signed by Brazil and Argentina provides for full control of nuclear equipment, installations, and materials. Full control allows both countries to have unrestricted access to the nuclear technology developed by each country. This announcement, which was made on 5 September by Pedro Paulo Leoni Ramos, SAE [Strategic Affairs Secretariat] secretary, to CPI [Commission for Congressional

Investigation] members, goes against the position of military ministers who insist on the need to preserve research secrets.

The bilateral accord, which will have to be endorsed by Congress, foresees full control of projects implemented by both countries. Leoni said that the second agreement to be signed between Brazil, Argentina, and the International Atomic Energy Agency [IAEA], which must be approved by the congresses of both countries, provides for nonintrusive supervision (it will not interfere at the level of technological research) by both countries. Leoni added that full supervision does not constitute a risk for Brazil because the country is moving toward broad integration with Argentina through Mercosur [Common Market of the South].

The military believes the bilateral accord is acceptable because it preserves the secrecy of industrial applications for nuclear research. Officials of Navy Minister Admiral Mario Flores's cabinet said that when Leoni talks about broad supervision he is probably referring to the Accounting and Common Control System (SCCC) agreement signed by Presidents Fernando Collor and Carlos Menem in Foz do Iguacu at the end of last year.

An official of the Navy minister's cabinet said: "The agreement is considered acceptable. The level of supervision controls nuclear technology, but preserves the secrecy of technological processes."

Next week President Collor will send Congress a nuclear policy bill drafted by the SAE that updates a similar bill submitted at the end of the Sarney administration.

Jose Luiz de Santana Carvalho, National Commission for Nuclear Energy president, will preside over the annual IAEA conference in Vienna, replacing SAE Secretary Pedro Paulo Leoni. It is the third time Brazil will preside over this meeting. According to Santana, the main issue on the agenda is Iraq, which was able to hide its nuclear arsenal from IAEA supervision.

Official Outlines Nuclear, Intelligence Spending

PY0409004691 Brasilia Voz do Brasil Network in Portuguese 2200 GMT 3 Sep 91

[Excerpts] Presidential Secretary of Strategic Affairs Pedro Paulo Leoni Ramos today briefed the National Defense Committee on the activities of the Secretariat of Strategic Affairs [SAE] and the use of budget allocations in secret areas.

Leoni Ramos denied press reports that SAE drew up a report on Rosane Collor, former Brazilian Welfare Legion president, adding that he will file a criminal lawsuit against the newspaper that published the report.

The secretary explained that secret budget allocations have been used for a long time and that this is permitted by the law, despite the fact that the press has given the impression that the use of such allocations is something new and out of control. [passage omitted]

Leoni Ramos mentioned figures on secret nuclear expenditures and on SAE intelligence work. In 1991 SAE allocations amounted to 12,537 million cruzeiros, of which 3,824 million was spent through August on the development of sophisticated nuclear technology. [passage omitted]

Use of Secret Funds for Program Confirmed

91SM0502Z Sao Paulo GAZETA MERCANTIL
in Portuguese 4 Sep 91 p 10

[Text] Secretary of Strategic Affairs [SAE] Pedro Paulo Leoni Ramos confirmed yesterday to the National Defense Committee that secret appropriations in the amount of 3.8 billion cruzeiros had been spent on nuclear energy, out of a total of 12.5 billion cruzeiros allocated to that field under the secretariat's budget. However, Leoni did not explain to the deputies where and how the money was used. Agencia Globo reported that he claimed he is forbidden to do so by the Constitution and a body of laws that, according to Leoni, are vital to national security.

"I can confirm the use of secret funds, but the legal precepts that currently govern this secretariat prevent me from going into detail," Leoni told Sao Paulo Deputy Jose Dirceu (PT) [Workers Party], who had formulated the request calling on Leoni to explain the secret use of budgeted funds.

The secretary backed the suggestion that the National Defense Committee begin to monitor the use of secret funding by the government, while maintaining confidentiality. According to Agencia Brasil, he stated that "It is public knowledge that the Secretariat of Strategic Affairs sincerely wants the national Congress to monitor SAE activities, objectively and systematically, especially those that represent intelligence work and the use of secret funds."

Leoni also said—according to Agencia Globo—that as of August of this year, 0.45 [as published] percent of the secretariat's budget had been spent on secret funding in the intelligence area.

During nearly two hours of testimony before the committee, Leoni stressed that the use of secret appropriations is perfectly legal. The meeting was 45 minutes late in starting, due to absence of a quorum.

Speaking to a plenary session of fewer than ten legislators, the secretary gave a formal report of the budget expenditures by the SAE without giving very many details, but took advantage of the opportunity to denounce, according to reporter Adriana Vasconcelos, "the scurrilous and ill-considered accusations, so sadly disseminated on this subject by those who stubbornly persist in maligning authority."

Pedro Paulo Leoni Ramos stated, according to Agencia Brasil, that during the period 14 March to 31 December

1990, "the review of accounts performed by the Secretariat for Internal Control of the Office of the President concluded that the outlays were in order. This led to their approval by the secretary of strategic affairs and the secretary of internal control, and subsequent forwarding to the federal Court of Auditors."

CUBA

Progress Noted on Nuclear Reactor Near Juragua

PA0409155091 Madrid EFE in Spanish 0055 GMT
3 Sep 91

[Text] Havana, 2 Sep (EFE)—It was announced here today that the airtight sealing has been completed on the first VVER-440 reactor at the Cuban nuclear plant that is being built southeast of Havana with Soviet aid. Workers have now begun to put the steel blocks of its protective dome into place.

The first Cuban electronuclear plant is being built with the assistance of Soviet advisers in the area of Juragua, Cienfuegos Province, over 300 km from Havana. Officials estimate that the complex will save 2.4 million tons of oil a year and will generate 12 percent of the electrical energy consumed on the island.

Experts say that when the steel blocks have been soldered at 7,650 points, the necessary conditions will have been established for the 3,300 cubic meters of concrete to be poured in late November.

The reactor's protective dome will be 62 meters high and will consist of some 450 cubic meters of concrete.

The complex, which is considered the largest project currently under construction on the island, will involve the operation of four VVER-440 reactors, the first of which is scheduled to begin operating this year.

Cuban authorities seek to use this nuclear plant to achieve greater energy autonomy, so as to depend less on oil from the USSR, Cuba's sole provider of that fuel, which sends 10 million tons of oil to the island each year.

When the four reactors are operational, the plant will have over 1,600 megawatts of generating capacity.

These reactors are the Soviet-made VVER's. They use water pressure, and each has the potential to produce 417 megawatts of power.

Joint Venezuelan Biotechnology Conference Opens

FL0509124991 Havana Tele Rebelde Network
in Spanish 1100 GMT 5 Sep 91

[Text] [Begin recording] [Reporter Gladys Rubio] We are in the Solidarity Room of the Habana Libre Hotel, where the first Cuban-Venezuelan Biotechnology and Microbiology Conference is being held. Specialists from various Venezuelan institutions, such as the Central

University, Simon Bolivar University, Eastern University, and Zulia University, are participating in this meeting. On the Cuban side, specialists from the Oceanology Institute, the Biology Department of the University of Havana (ICITCA), CENIC [National Center for Scientific Research], and the Genetic Engineering and Biotechnology Institute are participating.

This is Hector Bastardo, a research professor at the Central University of Venezuela. I have seen, professor, that ecological issues are very prominent here at this meeting.

[Bastardo] Well, yes, in general, because there is a lot of research concerning that subject. However, I could tell

you that the main objective of this first Cuban-Venezuelan Biotechnology, Microbiology, and Marine Ecology Conference is basically to strengthen the ties that exist between our two countries because we have the same needs, the same problems, and we are united by our peculiarities and particular characteristics as Latin American countries. Yesterday we met with the president of the Cuban Academy of Sciences and the Venezuelan ambassador, and we talked about these things, to strengthen this kind of exchange, since a Venezuelan is going to stay here to do his doctoral dissertation and we hope that next year two Cubans will come to Venezuela, to begin this kind of exchange.

[Rubio] This is a small conference, but an important one which will surely serve to unite our nations in knowledge. [end recording]

INDIA

U.S. Urges India To Sign Nonproliferation Pact*91WP0145A Bombay THE TIMES OF INDIA
in English 29 Aug 91 p 11*

[Article by Gautam Adhikari]

[Text] Washington, 28 August—The U.S. would like India to reconsider its opposition to signing the nuclear non-proliferation treaty (NPT), now that China and France have agreed to sign it.

This message was conveyed to Gen. S.F. Rodrigues, chief of the army staff during his meeting with Mr. Lawrence Eagleburger, deputy secretary of state of the U.S. The two had a "very cordial" meeting, said a source who preferred to remain anonymous.

Gen. Rodrigues was on a goodwill visit to Washington and various U.S. defence establishments. He met Gen. Colin Powell, chairman of the U.S. joint chiefs of staff, and Mr. Donald Atwood, deputy secretary of defence, at the Pentagon. They discussed matters of mutual security interests.

Many areas of possible cooperation between India and the U.S. on security questions in the South-Asia and Indian Ocean region were reportedly discussed. In a subtly changing scenario of regional power relations, especially in the context of Pakistan's somewhat changed standing in the eyes of U.S. policy-makers, India's conversation with the U.S. on security matters assumes importance.

At his meeting with Mr. Eagleburger, the general was urged to appreciate the U.S. concern with the proliferation of nuclear weapons states. While it appreciated the fact that India had chosen not to develop a range of nuclear weapons despite exploding a nuclear device in 1974, the U.S. was also keen to persuade India to sign the 1968 NPT.

India's stand has long been that nuclear weapons proliferation should be tackled on a comprehensive global a basis and not any regional one, since the latter would smack of discrimination in a world where at least five nations had large stockpiles of such weapons. India believes that control of the "vertical" expansion of nuclear weapons—that is, the increase in stockpiles and greater sophistication of weapons by existing N-weapons powers—was a must if "horizontal" expansion—that is, the spread of such weapons to new nations—had to be checked.

However, lately, pressure has mounted on India to sign the NPT in a situation where China and France—two nuclear weapons powers which had hitherto not signed the treaty—have now agreed to sign it. Agreeing to sign is not quite the same as actually signing the treaty and it could still be some time before China and France in fact sign. But, their agreeing to do so is significant.

India might soon have to take some kind of a step which seems at least close to the position of China and France, said an observer of the South Asia scene. Mr. Eagleburger's plea to Gen. Rodrigues could be seen in this context.

PRC Decision on Nonproliferation Pact Welcomed*91WP0147A New Delhi PATRIOT in English
12 Aug 91 p 5*

[Text] Defence and foreign affairs experts on Sunday welcomed China's decision in principle to sign the Nuclear Non-proliferation Treaty (NPT) but felt that India should stick to its principled stand and refrain from following suit, reports PTI.

Mr. K. Subrahmanyam, former director of the Institute of Defence Studies and Analysis, said "if we are patient enough and wait till Israel and Pakistan are accommodated into the treaty, they (us and its allies) most probably will accept us as a nuclear weapons power in the NPT.

Mr. S.K. Singh, former foreign secretary, said China would be joining the NPT as a nuclear weapons power with certain discriminatory clauses favouring them rather than hurting their interests.

Prof. Bhabani Sen Gupta of the Centre for policy research expressed the view that India should convene a conference of the countries which had not signed the NPT and frame a 'non-discriminatory' treaty.

The NPT which India holds discriminatory in nature, will come up for review on completion of 25 years in 1995, he said.

Mr. Subrahmanyam and Mr. Singh felt that China's decision to sign the NPT was considered inevitable after France's dropping of its objections.

Prof. Bhabani Sen Gupta saw an opportunity for India to discuss nuclear issues with China.

Asked whether the U.S. and its allies would increase pressure on India to sign the NPT, Mr. Subrahmanyam said "there are lots of people in the country who would like to surrender."

He reminded them that Mr. John Glenn, U.S. senator whose voice on the non-proliferation issue was important next to President George Bush, said last week that as long as China transferred nuclear technology to Pakistan and provided missiles, one could not expect India to join the non-proliferation regime.

Indigenously Built Satellite Slated for Launch*BK1709062091 Delhi All India Radio Network
in English 0435 GMT 17 Sep 91*

[Text] The indigenously built (?free) first satellite in the INSAT-2 series will be launched in March next year. The Indian Space Research Organization, ISRO, chairman,

Dr. U.R. Rao told newsmen in Bangalore yesterday that the satellite will be put into space by the Ariane-launch vehicle. He said several countries have evinced keen interest in the pictures sent by the IRS-1 now in orbit.

Remote Sensing Satellite Fully Operational

BK1609163091 Delhi All India Radio Network in English 1530 GMT 16 Sep 91

[Text] The second Indian remote sensing satellite, IRS-1B, launched on the 29th of last month has become fully operational. An official press release issued in New Delhi today says the detailed testing of all its subsystems and payloads has been completed. All the systems on board the satellite are functioning normally.

Iyengar on Nuclear Plant Equipment, Operations

91WP0146A Madras THE HINDU in English 28 Aug 91 p 10

[Text] New Delhi, 27 August—As the world enters the 21st century, demand for electricity in developing countries has come to outstrip the known sources of supply and the gap between developing and developed world in per capita availability of electricity has begun to widen. Scarcity of resources like gas and oil with uncertainty in supply and prices has compounded the problems. The option of nuclear energy to meet the electricity needs of developing countries has therefore assumed greater importance than ever before and the issue is whether the trend should be towards big or small and medium size nuclear plants.

Leading companies both international and domestic along with officials from India's Nuclear Power Corporation, the International Atomic Energy Agency, the European Community and representatives from over 40 countries, including China, U.S. and Japan assembled here yesterday to discuss the theme "Planning for World Energy-Demand and Supply" at a three-day global seminar on "Small and Medium Nuclear Reactors."

In his opening remarks, Dr. P.K. Iyengar, chairman of the Atomic Energy Commission said it could be argued that to build small and medium size nuclear plants may not be economical, especially when experience had been gained in the operation of large capacity nuclear reactors of 1000 MW and above rating. In developing countries, however, such economic considerations could not form the basis of planning for nuclear power and he remarked that managing the back end of fuel cycle in large reactor systems still remained a major problem.

Clearing spent fuel: The cost of storing spent fuel or for reprocessing and disposal of the waste was creating doubts in the public minds. He said this problem had become acute in the East European Countries which no longer had the assurance of the Soviet Union for the disposal of spent fuel. Secondly, for the developing countries the fuel for electric power generation had the same priority as food. Future expansions of electricity by

nuclear sources should not rest on value added imported enriched uranium to sustain a growing nuclear power programme. Thirdly, Dr. Iyengar said the high capital cost mainly attributable to the higher standard of living in advanced nations did not hold good in developing countries.

He said the Pressurised Heavy Water Reactor (PHWR) system had the added advantage of being dependent only on natural uranium, a commodity whose cost had come down over the years. It was in this context that renewed emphasis on better design of a medium size nuclear power station using indigenous resources based on easily available fuel material assumed significance. This, he said, was also the objective of the three day seminar.

According to Dr. Iyengar with the perceived demand and supply position for electrical energy and the public concern for safety 'unfortunately based on misinformation,' the objective of nuclear power development seemed to have lost its urgency. It was therefore necessary to examine the need for developing new reactor designs which could produce cheap electricity, augment safety and enhance fuel resource utilisation of an energy hungry developing world.

Referring to the Indian experience, he said self-reliance had been the guiding principle. The choice of reactor system in India's case was made after careful evaluation of the uranium and thorium resources position and the need to achieve a large scale nuclear power programme to meet its energy demand. Dr. Iyengar said India already had five PHWRs in operation in addition to two BWRs. Seven more PHWRs were in various stages of construction and two of these units (including Narora) would go critical soon. All these units had a rating for 220 MWe.

Graduating from the experience, India had already commenced construction of two units of 500 MWe PHWRs and more units would follow. Dr. Iyengar asserted that the decision of India to stick to small and medium size nuclear power units was right.

In view of the country's limited uranium resources it would have to switch to other reactor systems which could make efficient use of plutonium generated in PHWRs and also concentrate on use of thorium. Dr. Iyengar said it was on this account that India had active interest in Fast Breeder Technology. He told the seminar that after setting up the Fast Breeder Test Reactor "we have now completed the design of a 500 MWe prototype fast breeder reactor. Besides, India was looking at the next generation of heavy water reactor (Advanced Heavy Water Reactor) aimed at power production through use of thorium with minimum inputs in the form of plutonium. He said this new design would also incorporate a number of features which would improve both safety and economics.

Target scaled down: Later, in an informal chat with newsmen, Dr. Iyengar said the country's target for nuclear power production had been scaled down by only

1000 MW from 10,000 MW set for the year 2000. The target had to be reduced because the financial allocation was likely to be only Rs. 16,000 crores against the original demand of Rs. 32,000 crores to produce 10,000 MW. As per the revised target for the turn of the present century, nearly 7000 MW would be generated from PHWRs and 2000 MW from light water reactors likely to be commissioned with Soviet help.

Interestingly, the 1990-91 annual report of the Department of Atomic Energy indicated that only 6050 MW of power would be produced from nuclear reactors by the end of this decade. The country currently had an installed capacity of 1,465 MW from seven nuclear power plants, two each at Tarapur, Rajasthan and Kalpakkam and a 235 MW units at Narora. Besides, seven more projects were likely to be commissioned before 1995 end.

The seven new plants include one 235 MW unit at Narora (by the end of this month), two 235 MW units at Kakrapar in Gujarat (one by December 1991 and another by end 1992), two units of 235 MW each at Rajasthan and Kaiga in Karnataka by 1995.

The fast changing political scenario in the Soviet Union, seems to have put some kind of spanner on the two 1000 MW each LWRs proposed to be set up at Koodankulam in Tamil Nadu. Though Dr. Iyengar told newsmen that there was not change in the position, other governmental sources were not hopeful of the project coming through. In fact the sources said, "If the Soviets were not prepared, then French would come in as they were just waiting in the wings for the Soviets to withdraw."

Expert Urges Nuclear Weapon Production

91WP0148A Madras *INDIAN EXPRESS* in English
7 Aug 91 p 2

[Text] Madras, 6 August—"Lack of political guts, which is anyway a scarce commodity in India," prevents India from developing nuclear weapons—a most unwise thing to do when neighbours like China and Pakistan possess nuclear weapons former director of the Institute of Defence Studies and Analysis K. Subramaniam observed on Tuesday.

Delivering a lecture on "Nuclear threat-issues and responses" organised by the Madras University Department of Defence and Strategic Studies, he pitched strong for India to go nuclear. "I am against nuclear weapons, and for a nuclear weapon-free world. We should all work towards it. But that does not mean that we should keep quiet and allow all the others to have nuclear weapons," he said.

Ridiculing a view that since India had managed to live 'comfortably' with China even after the latter had developed nuclear weapons 27 years ago, and could live the same way with Pakistan, he said soon after China exploded its first nuclear bomb in October 1964, India had gone begging first to Britain, and then around the

world, for a nuclear umbrella. "Is that what you call living comfortably with Chinese nuclear weapons"?, he asked.

For the nation to go on increasing its defence expenditure on conventional weaponry, which would not be of much use in a war in which the opponent had nuclear weapons, Mr. Subramaniam said, would prove far more costly. "That way you are just wasting your money. The only sensible way to reduce our expenditure is to go nuclear and tell Pakistan that let us both be sensible and cut down on our defence forces. This is what they have done in Europe," he said.

India already had all the necessary infrastructure, thanks to its civil nuclear programme, so a nuclear deterrent programme would not be all that costly.

Criticising successive governments, beginning with Rajiv Gandhi's government, for failing to take a definite stand on this, Mr. Subramaniam said politicians were not the only ones to blame for this "emotional block" preventing India from going nuclear. Senior people both in the armed forces and the civil service were also dragging their feet on the issue.

Addressing the meeting, University Vice-Chancellor Dr. S. Sathikk said a 'defence consciousness in our people,' had to be developed. He was for introducing some form of defence studies in the curriculum of students as in the countries like Singapore and Philippines.

Former Ambassador to China K.P.S. Menon said it would be worthwhile to find out if it was possible to go beyond nuclear weapons in the country defence strategies.

President of the TN branch of the Air Force Association Air Vice Marshal V. Krishnaswamy welcomed the gathering and Head of Department R.N. Swarup proposed a vote of thanks.

Indigenous Reactors for Planned Power Plant

91WP0139A Madras *INDIAN EXPRESS* in English
19 Jul 91 p 13

[Text] Thiruvananthapuram, 18 July—The state government has tentatively accepted Peringom in Kasargod as the site for the proposed 1000 mw nuclear power plant. The decision was conveyed to the Atomic Energy Commission Chairman, Dr. P.K. Iyengar, at a high-level meeting here on Wednesday.

Electricity Minister C.V. Padmarajan who was present at the meeting along with Chief Minister K. Karunakaran, Industry Minister P.K. Kunhali Kutty, Chief Secretary Padma Ramachandran and Industry Secretary K. Mohanachandran, told ENS [Express News Service] that Dr. Iyengar has given a definite assurance to the government about the safety of the two nuclear reactors of 500 MW each and the government had given him the go-ahead.

The Atomic Energy Commission had identified a number of sites but chose Peringom as it has a low density of population, Mr. Padmarajan said.

He said Dr. Iyengar had mooted some proposals regarding the reactors which were prima facie acceptable to the government. "We have asked Dr. Iyengar to go ahead with the project" the minister said. But he admitted that the proposals were at a very early stage and further discussions would be held with the commission either in Delhi or Thiruvananthapuram.

According to Dr. Iyengar, the reactors will be totally indigenous and that whole project with a gestation period of seven years was estimated to cost Rs. 2,500 crore. He did not say why the commission had decided to go in for indigenous reactors instead of the USSR-made VVER type recommended earlier.

The chances for the plant being set up before the turn of the century seem to remote in the context of switchover from Russian-type indigenous ones. The Atomic Energy Commission has several projects on hand, including the one at Koodankulam in Kanyakumari district.

Dr. Iyengar said a final decision on the plant depended on the centre, which had to view the Peringom site from a broader national perspective.

ENS adds from Kannur: The anti-nuclear forum has protested against the move to up two nuclear reactors. It said the decision was fraught with dangerous consequences.

Center Hesitant over Uranium Fuel Complex

91WP0141A Bombay THE TIMES OF INDIA in English 10 Aug 91 p 6

[Text] Patna, 9 August—The Centre has reportedly developed cold feet as regards setting up of a uranium oxide fuel complex in Turandih in Chaibasa district, even after completing all formalities including soil testing and acquisition of a vast track of land, measuring over 230 acres.

The plant was to be a step up on a similar plant at Hyderabad and was to cost over Rs 600 crores. The chief executive of the atomic energy department, Mr. K. Balaramamoorthy, had, in a letter to the chief secretary in February 1990 made it clear that the atomic energy department was very upset over the slow pace in the acquisition of lands by the Bihar government for setting up the project.

Mr. Balaramamoorthy had stated that there was urgent need of setting up the project for the supply of fuel to nuclear power reactors in the country, which were in an advanced stage of completion. Any delay would adversely affect the commissioning of nuclear power stations, the letter added.

Subsequently, the state revenue and land reforms department moved fast to acquire the lands. The revenue

secretary, Mr. Phulchand Sinha, and the director of the land acquisition, Mr. S.K. Singh, visited the project site and urgent steps were taken to acquire the requisite lands.

Ultimately, over 228 acres of land were acquired at the rate of RS 1 lakh per acre. The rate was agreed upon at a high-level meeting under the presidentship of the then chief secretary, Mr. Kamal Prasad. The meeting was also attended by the joint secretary of the atomic energy department, Mr. V. Rangnathan, and the project director, Mr. B.P. Verma, a few months back.

Strangely, even after all this, the atomic energy department is sleeping over the matter. At last the land reforms commissioner, Mr. Bhashkar Bannerjee, has reportedly written a letter to the department to take over possession of the land, pending for the last several months.

The department had to set up the fuel complex at the nearest point of availability of uranium ore. Jadugoda ore mines is said to be the richest in uranium ore. The Uranium Corporation of India used to supply crude fuel for conversion into fuel which is supplied to different nuclear reactors.

Progress, Plans in Missile Development Told

Pawar on Prithvi

91WP0142 Bombay THE TIMES OF INDIA in English 8 Aug 91 pp 1, 11

[Text] Bombay, 7 August—India's prestigious guided missile programme crossed yet another significant milestone today with the fifth successful launch of the surface-to-surface missile, "Prithvi," at the Sriharikota space complex, near Madras at 10:58 a.m. taking the country into a select club of five countries—U.S., USSR, China, France and Germany.

This was announced at a news conference by the Union defence minister, Mr. Sharad Pawar, here today.

Mr. Pawar's announcement, however, caused some confusion in defence circles because he described it as a surface-to-air missile. Experts have always mentioned Prithvi as a surface-to-surface missile and the defence minister's announcement led to speculation whether the country was going in for "a derivative of the Prithvi missile."

Touching on some of the other areas in India's weapons development programme, Mr. Pawar said defence scientists were planning many sophisticated weapons with the emphasis on indigenous production. "It took nearly 10 to 15 years," to perfect them, he told reporters.

Mr. Pawar said the country was capable of making nuclear weapons, but it was committed to using nuclear energy only for peaceful purposes. He made it absolutely clear that India did not believe in the nuclear arms buildup.

He said India could step into the "world arms bazaar," as our scientists had the capacity to produce excellent arms. He said he would visit the Soviet Union next month on a "goodwill tour." His tour would be preceded by the visit of the minister of state for defence, Mr. M. Arunachalam.

After the Soviet tour, Mr. Pawar said he would visit Washington to meet officials at the Pentagon.

Production of armaments could be through the private sector and pointed out that some of the country's ordnance factories had not utilised their capacity fully. India earned Rs 78 crores through export of arms and it could go up to Rs 500 crores, he added.

Answering a question on secrecy, he said, "defence need not be treated as a holy cow and each and everything about it does not have to keep a secret though there was need for secrecy on sensitive matters."

Head's Remarks

91WP0142 Bombay *THE TIMES OF INDIA* in English
10 Aug 91 p 12

[Text] Madras, 9 August—India's indigenously-developed guided missiles "Prithvi" and "Trishul" will be deployed in the armed force next year, according to Dr. A.P.J. Abdul Kalam, director of the Defence Research and Development Laboratory, Hyderabad and chief architect of the country's guided missile programme, reports UNI.

The technology transfer for productionising the missiles is progressing, Dr. Abdul Kalam said while delivering the convocation address of the Indian Institute of Technology here.

The missile programme has multiple projects—Prithvi, Nag, Akash, Agni and Trishul for multi users.

The missiles employed state-of-the-art technology and displayed the country's trajectory of independence from foreign technology (TIFT), Dr. Kalam declared.

The improved version of the surface to air missile "Prithvi" was test-fired successfully on 7 August from the Sriharikota Range making the country one of the select group of nations possessing the missile technology.

Thirty-four institutions and research and development organisations were involved in the design and technology development and transfer to 22 public sector undertakings, ten ordnance factories and nine private sector industries for production, Dr. Kalam said.

Dr. Kalam said it was decided that the complete design of the missile system could be carried out within the country using its resources for strategic reasons.

Even though developed countries had super computers to evolve designs and configuration we settled down to

computers we had with the lesson "do not wait for more powerful super computers but use the power of your minds."

Dr. Kalam, however, observed that when the country was designing future aerospace systems, it would have super computers through parallel processors designed and built within the country.

The missile's propulsive power comes from solid and liquid propellants or RAMJET and the energy level already achieved in India is on a par with the developed countries, Dr. Kalam said. Similarly in the material technology, missiles built in India use high strength materials like maraging steel and composites including the highest specific strength material called Carbon-Carbon.

The strapdown inertial guidance system with onboard computer developed and used in both "Prithvi" and "Agni" employed state-of-the-art technology, he said.

Unauthorized Use of Heavy Water, Uranium Oxide

91WP0140A Calcutta *THE STATESMAN* in English
20 Jul 91 p 7

[Text] Durgapur, 19 July—Experts of the Dhaba Atomic Research Centre would arrive here soon to ascertain whether there is any radiation effect, reports PTI following the use of heavy water and uranium oxide in the laboratory of the Chemical Engineering Department of the regional engineering college here. Both the chemicals are recorded as "strategy" and are not available in the open market or even for research work in the Indian Institute of Technologies. The professor concerned has been asked to submit a report about the place from where he obtained the two chemicals.

Plan To Use Thorium in Nuclear Reactors Proceeds

BK1709135991 Delhi *PATRIOT* in English
5 Sep 91 p 2

[Text] The Bhabha Atomic Research Centre (BARC) has announced plans to start large-scale work on the third phase of the atomic energy programme where thorium instead of uranium will be used to fuel the reactors, report PTI.

As part of the scheme as much as 600 kg of thorium will be loaded into the core of the second unit of Narora Atomic Station which is expected to go critical soon.

This is the first large-scale introduction of thorium into power reactors.

Addition of thorium would "become a regular feature in future reactors, every reactor being initiated with a few hundred kilograms of thorium". BARC said.

BARC is also working on a scheme to introduce thorium along with uranium-plutonium mixed oxide into one of the operating pressured heavy water reactors (PHWR).

"Although the date is not yet certain this might come through in a year or two", BARC said.

According to BARC, these are the two immediate proposals for thorium utilisation without affecting the ongoing power programme.

BARC is speeding up work on thorium because the energy potential of thorium in thermal reactors "is way above that of natural uranium" presently used to fuel the PHWRs.

India has five times more thorium than uranium, and the energy content in thorium reserves is about 400 times the energy that can be generated from uranium, BARC said.

The first phase (PHWR) of the nuclear programme has reached commercial stage, the second phase of fast breeder reactor has progressed to the design of a prototype, and "we are now proposing to start large-scale work on thorium phase".

Thorium is processed from beach sands of Kerala, Tamil Nadu and Andhra Pradesh. Indian thorium is considered to be of high grade.

Thorium by itself is not a nuclear fuel but it turns into uranium-233—an excellent nuclear fuel—when bombarded by neutrons inside a reactor. The U-233 is chemically separated from irradiated thorium.

BARC made a beginning 40 years ago when it introduced thorium rods in the Canadian built Cirus reactor and then chemically processed it to separate U-233.

Subsequently the scale of fabricating thorium rods was increased and tons of thorium were produced. For the first time 50 kg of thorium was introduced in the Madras power reactor in 1985.

The second unit of Narora station is the first power reactor where 600 kg of thorium will be introduced to produce sizable U-233 for the third phase of the atomic programme.

BARC has already designed two small reactors exclusively fuelled by U-233 and extensive studies have been carried out for the preparation of a mixed oxide fuel using thorium and U-233.

"Now we expect to enlarge our scale of operations on thorium since capability on a small scale has already been demonstrated", said Dr Kamla Balakrishnan of the reactor engineering division at BARC.

She said the long term strategy "is to return to thermal reactors for the third phase since thorium converted into U-233 will help keep the cycle going without sizable inputs of external fissile material".

BARC is considering several ways of using thorium in PHWRs. In one such method, only the first charge of U-233 will be provided externally. Thereafter, the reactor can operate on thorium alone.

In another method, the PHWR will be supported by U-233 fuel produced externally in what is called "fusion breeders". Working on the thorium cycle, a fusion breeder can support 50 or even 100 times its own capacity of installed electrical power, BARC said.

BARC said it is also working on an advanced heavy water reactor which retains the desirable features of PHWR but optimises the system for thorium.

Police Foil Attempt To Smuggle Out Uranium

BK3008160891 Delhi All India Radio Network in English 1530 GMT 30 Aug 91

[Text] Uranium worth \$50,000 in the international market was seized in Ranchi yesterday, while being smuggled out of the country. The local superintendent of police informed newsmen that two persons were arrested in this connection. He said it is not yet certain as to which country the uranium was being smuggled to.

Editorial Views Space Satellite Program

BK0909110191 Delhi INDIAN EXPRESS in English 31 Aug 91 p 8

[Editorial: "Well Done"]

[Text] The temptation to dismiss Parliament's enthusiastic response—the Rajya Sabha even adjourned itself for the day—to the successful launching of the Indian Remote Sensing Satellite-1B (IRS-1B) should be resisted. Though orbited by a Vostock launcher in the Soviet Union's Baykonur Cosmodrome, the indigenously designed and fabricated satellite is yet another feather in the cap of Indian scientists who have repeatedly shown their mettle in the face of heavy odds. A significant landmark in the advance of science and technology in India, IRS-1B, which follows the successful launching of IRS-1A in March, 1988, will greatly help this country, with its diverse geological features, to manage its land and ocean resources more efficiently. This once again underlines the contribution that India's space programme has been making to development. The role of the INSAT-1D, a multi-purpose communications satellite, in the operation of its telecommunication network, television broadcasting and round-the-clock weather monitoring is well known.

The country, of course, can really be considered to have come of age in space science and technology when it develops its own launching capability. Unfortunately the progress in this direction has by no means been even. Both Augmented Satellite Launch Vehicles [ASLV], designed to carry payloads of 150 kg and 400 kg respectively, failed to take off in March 1987 and July 1989. The Polar Satellite Launch Vehicle [PSLV], which is being designed to carry a

payload of 1,100 kg and which will be a much more complex and sophisticated mechanism, has had to face a series of problems since it was conceived. The Prime Minister's statement in Parliament on Thursday in connection with the IRS-1B launch, that India will come to have its own independent launching capacity in 1992 when the PSLV will be ready at Sriharikota, may therefore prove to be a little optimistic. While optimism is understandable on occasions like the one on Thursday, it will be more realistic to keep one's fingers crossed until the PSLV is launched successfully.

LIBYA

Geneva Meeting on Biological Weapons Viewed

LD1009103491 Tripoli JANA in English 0823 GMT
10 Sep 91

[Excerpt] Tripoli, al-Fatih [September] 10 (JANA)—News agencies reported that delegates from 17 states started a meeting in Geneva yesterday to look into the international agreement on germ warfare signed in 1972.

World news agencies reported that the meeting, which will last for three weeks, was aimed at finding the best means to ban the production, development and stockpiling of germ-warfare [weapons]. [passage omitted]

PAKISTAN

Benazir Bhutto on Nuclear Capabilities

Has Nuclear Deterrent

BK3108145591 Hong Kong AFP in English 1134 GMT
31 Aug 91

[Text] Islamabad, Aug 31 (AFP)—Pakistan is capable of building a nuclear deterrent if needed, opposition leader Benazir Bhutto said Saturday.

Pakistan "has sufficient nuclear information that, in the event of a threat it could rapidly produce a deterrent," she told foreign correspondents at a meeting here, adding "there was no need for Pakistan to have a quicker capacity."

Reiterating her opposition to nuclear arms proliferation, Bhutto said Pakistan's nuclear programme was controlled by President Ghulam Ishaq Khan.

She said the president considered her a security threat and had kept her in the dark about the country's nuclear capability in the months before he sacked her as prime minister in August 1990 for alleged incompetence and corruption.

Two months after her sacking the United States, which suspected that Pakistan had boosted its uranium enrichment programme in April 1990 amid increased tension

with India, suspended economic and military aid to Islamabad, which Bhutto called a "disaster" for her country.

She claimed it was not until June-July of that year that the United States had clearly alerted her to the dangers of the situation.

She launched an attack on the "political stupidity" of her successor Nawaz Sharif who she said was pursuing an "aggressive" nuclear policy "at the instigation of the president."

No comment was immediately available from the offices of the president and prime minister on the allegations.

Bhutto said she favoured talks with India brokered by the United States aimed at preventing nuclear and conventional arms proliferation on the subcontinent.

But she added that she opposed signing the nuclear non-proliferation treaty as it was Pakistan's "only card" if such talks were held.

Bhutto said she was disappointed that "clouds" had appeared in plans for France to deliver a nuclear plant to Pakistan because of "ambiguities" over Islamabad's nuclear policy.

French President Francois Mitterrand approved the project in February, 1990.

Spokesman Clarifies Remarks

BK0209091391 Islamabad THE MUSLIM in English
2 Sep 91 p 4

[Excerpts] Karachi, Sept 1—A Bilawal House [Bhutto's residence] spokesman has clarified the report about Ms Benazir Bhutto's comment on the nuclear issue which appeared in a section of the press.

In a statement, the spokesman said that in her meeting with the foreign press at Islamabad on Aug 31, 1991, Ms Benazir Bhutto confirmed that the United States Government had threatened to cut off aid to Pakistan over the nuclear issue when she became Prime Minister on Dec 2, 1988, but she successfully overcame this threat.

"The President, she alleged, tried to keep her in the dark about the nuclear programme. He could not succeed, as Zulfikar Ali Bhutto was the father of the nuclear programme and she was fully aware of it. Moreover, the scientists had been recruited and directed by her father and thus had an equation with her." [passage omitted]

Ms Bhutto said even in the heat of the election campaign she never deviated from her party's stated position on non-proliferation because she held Pakistan's national interests higher.

She said the pressures for unilateral action by Pakistan in the wake of the ill-advised policies of the President would leave Pakistan without any moral or political pressure to compel India for mutual action.

She disclosed she had worked for a Camp David-style summit to bring about nuclear non-proliferation and a mutual arms reduction treaty between India and Pakistan, the spokesman concluded.

Regional Approach to Nonproliferation Stressed

*BK1709160191 Islamabad Radio Pakistan Network
in Urdu 1500 GMT 17 Sep 91*

[Text] Pakistan made a strong plea for pursuing a regional approach to effectively deal with the issue of nuclear proliferation, and with this end in view, it has been consistently advocating creation of a nuclear weapon-free zone in South Asia for the last 19 years. This was stated by the leader of the Pakistani delegation and chairman of the Pakistan Nuclear Energy Commission, Dr. Ashfaq Ahmed, while addressing the annual general conference of International Atomic Energy Agency in Vienna. He said Pakistan had in the past made

several proposals for a fair, equitable, and nondiscriminatory proliferation regime. Even this year, it proposed that the United States, the Soviet Union, and China should hold mutual consultations on the resolution of the nuclear weapons issue and hold talks with Pakistan and India.

On Pakistan's nuclear program, the chairman reaffirmed that it is completely peaceful in nature and is aimed at the country's socioeconomic development. Pakistan needs substantial energy to maintain a reasonable pace of its socioeconomic progress, and therefore, it has to increase its energy production. He called upon the industrially developed countries to realize that refusal to transfer nuclear technology for peaceful purposes on the pretext of nuclear nonproliferation policy will badly affect the economic progress of developing countries. He urged the developed countries to pay appropriate attention to the energy needs of developing nations and to meet their energy needs by wider cooperation in the peaceful uses of nuclear energy.

Yeltsin Meets With U.S. Secretary of State**Discusses Arms Control***LD1109171991 Moscow TASS in English 1645 GMT
11 Sep 91*

[By TASS parliamentary correspondent Yuriy Kozmin]

[Excerpts] Moscow September 11 TASS—Russian President Boris Yeltsin on Wednesday met U.S. Secretary of State James Baker at the house of Russian Soviets in Moscow. [passage omitted]

Both leaders also touched upon "Soviet-U.S. and Russian-U.S. relations from the point of view of reducing nuclear, strategic, tactical and conventional weapons, as well as carrying out reforms in the Army".

Speaking of strategic nuclear arms control, Yeltsin said "to make not only Americans but the whole world believe that only the centre, only one person can control them in the country," was the key issue at the talks.

"Strategic nuclear weapons will be controlled from the centre, from one point in the Soviet Union and none of the republics will have access to arms control," Yeltsin said.

The president said Baker and he also focused on ways to "stop help to Afghanistan and Cuba and cut arms supplies". [passage omitted]

Gives Assurance on Issues*LD1109213491 Moscow Russian Television Network
in Russian 2000 GMT 11 Sep 91*

[From the "Vesti" newscast]

[Excerpt] [passage omitted] After statements by the republics about their nuclear-free status, Russia will be the only one on whose territory nuclear weapons will be deployed. What will their destiny be? From where and how will control over them be implemented? Boris Yeltsin replied to these and other questions at an improvised news conference that took place immediately after the talks.

[Begin Yeltsin recording] The monitoring of strategic nuclear armaments will proceed, as it has proceeded, from the center, from the one point; that is, the Union. No republic has or will have access to control these weapons. A guarantee, so to speak, has been given to the secretary of state and to the American people that in this respect they can be reassured. These weapons will not end up in the hands of anyone else in the world. [end recording]

Baker Holds Meeting With Nazarbayev**Nazarbayev on Nuclear Weapons***LD1609091391 Moscow All-Union Radio Mayak
Network in Russian 0800 GMT 16 Sep 91*

[AZIYA-PRESS agency report]

[Excerpt] U.S. Secretary of State James Baker has described Kazakhstan as one of the most important republics in the country at a news conference held after the conclusion of his short visit to Alma-Ata. He highly assessed President Nursultan Nazarbayev as one of the respected and progressive leaders in the Union. [passage omitted]

Answering questions put to him by Soviet and foreign journalists, President Nazarbayev touched on the problems of nuclear weapons. He stated that the defense of the country should be a matter of common responsibility and that the nuclear missiles should be under joint control of the republics and the center.

Collective Control*OW1609155791 Moscow INTERFAX in English
1500 GMT 16 Sep 91*

[Transmitted via KYODO]

[Excerpt] Kazakh President Nursultan Nazarbayev and U.S. Secretary of State James Baker held a joint news conference in Alma-Ata on Monday at which they attached considerable significance to the development of bilateral contacts.

Mr. Baker described Kazakhstan as one of the Soviet Union's leading republics and Mr. Nazarbayev as one of the most influential Soviet leaders. He assessed his visit to Kazakhstan as "useful."

The U.S. official said as soon as the Soviet Union worked out an economic program in which the West would believe, it could expect Western nations to offer help not only to the Union as a whole but also to its separate republics.

Asked whether the United States thought it possible to exchange consuls with Kazakhstan, Mr. Baker said that his current trip to the republic spoke for itself.

President Nazarbayev said in reply to a question about the future of Kazakhstan-deployed nuclear weapons that the Soviet Union should have a single system of defense, but its nuclear missiles should be under the collective control of the republics. "I object to having such weapons controlled by only one republic, however large it may be," N. Nazarbayev said and added that Kazakhstan had banned all nuclear testing on its territory. [passage omitted]

Confirms Nuclear Arms Stance

*LD1609215891 Moscow Russian Television Network
in Russian 2000 GMT 16 Sep 91*

[From the "Vesti" newscast]

[Excerpt] Perhaps not everyone realizes that today's main event occurred in Alma-Ata. Kazakh President Nazarbayev made a tough statement that he will not renounce nuclear weapons on the republic's territory. Previously, Nazarbayev spoke of this in two interviews, to Japanese and U.S. journalists. He confirmed his position today during a joint news conference with U.S. Secretary of State Baker, who has finished his official visit to Kazakhstan. Nazarbayev said that Soviet nuclear weapons should be under the control of those republics which possess them and that he opposes these weapons and the possibility of their use being in the hands of one single republic—meaning Russia—or one center. Nazarbayev says that the decision to use nuclear weapons must be made by Moscow jointly with Kazakhstan. Baker announced at the news conference the U.S. intention to expand relations with Kazakhstan, noting that President Nazarbayev is one of the most recognized leaders in the Soviet Union. However, we have not received any reports from Alma-Ata on Baker's reaction to Nazarbayev's statement on nuclear weapons. Nevertheless, quite a few questions arise; for instance, how does Nazarbayev's statement agree with the decision previously adopted by Kazakhstan's parliament to declare the republic a nuclear-free zone? How will Gorbachev and Yeltsin react to the statement? They have stressed that the Soviet nuclear arsenal should remain under the strict control of the central government. [passage omitted]

No Control by Kazakhstan

*LD1709091191 Moscow Radio Moscow World Service
in English 0800 GMT 17 Sep 91*

[Text] Kazakhstan will not control the nuclear weapons deployed on its territory, it has been announced by Vitaliy Churkin, spokesman for the Soviet Ministry of Foreign Affairs, at a news conference in Moscow.

Commenting on Kazakhstan President Nursultan Nazarbayev's statement that his republic will exercise independent control over various kinds of weapons, including nuclear ones, Vitaliy Churkin said there was no reason to worry about the issue.

Further on Nuclear Arms Control

*LD1509134991 Moscow TASS in English 1332 GMT
15 Sep 91*

[Excerpt] Tokyo September 15 TASS—President Nursultan Nazarbayev of Kazakhstan said in an interview with the Japanese newspaper TOKYO SHIMBUN that the Russian Federation and Kazakhstan would form the nucleus of the future Union of Sovereign States but that does not mean that it is possible to agree to Russia's

control over all nuclear weapons. Its transportation alone will cost hundreds of millions of roubles.

In this connection Nazarbayev favoured cuts in the Soviet nuclear stocks down to a reasonable threshold and said the nuclear arsenal should be placed under control of a special committee under the State Council.

Kazakhstan intends to develop large-scale contacts with Japan, Nazarbayev said, and appeal to that country for assistance in building a Euro-Asian railway mainline to link Europe with China's Pacific coast. [passage omitted]

Mayor Rejects Yeltsin's Claim to Nuclear Weapons

*LD1109082791 Moscow TASS in English 0657 GMT
11 Sep 91*

[Text] Kiev September 11 UKRINFORM-TASS—Lvov Mayor Vyacheslav Chornovil running for the Ukraine's presidency, has denounced Russian President Boris Yeltsin's wish to concentrate all Soviet nuclear weapons on Russian territory.

Yeltsin put forward the proposal during a telecast with the United States last Friday.

"First, we confirm our adherence to the intention to become a nuclear-free state stated in the Ukraine's declaration of state sovereignty," reads Chornovil's statement distributed here on Tuesday.

"At the same time, there is no doubt the independent Ukraine is a legal successor of all material and technical resources, including the former Soviet Union's weapons, like Russia, Kazakhstan and other republics," Chornovil said.

"The way the question is put is strange, as one state has to transfer its nuclear potential to another," Chornovil said.

"The issue of forming the Ukraine's armed forces, which is connected with nuclear weapons, should be resolved by means of agreements between nuclear states. This is the road the Ukraine will follow towards a step-by-step and full liquidation of its nuclear potential," Chornovil said.

"The fact that there are nuclear weapons in the Ukraine and the wish to make the republic a nuclear-free state as soon as possible will boost forming the republic's nuclear-free armed forces and the world's recognition of the Ukraine, a U.N. founding member, as an independent state and a full-fledged subject of the international law," Chornovil said.

Envoy to UN on Soviet Property, Nuclear Weapons

*OW0609191791 Moscow INTERFAX in English
1532 GMT 6 Sep 91*

[Transmitted via KYODO]

[Text] The Ukrainian ambassador in the United Nations Gennadiy Udovenko said his republic counted on 25 percent of all Soviet property abroad.

He also said the Ukraine intends to rid itself of all nuclear weapons on its territory, but a commission of experts would have to decide whether these must be scrapped or transferred to the Soviet Union.

The ambassador also spoke of the Ukraine's plan to establish diplomatic relations with the United States, Canada, Israel, and its neighbours.

DPRK Rejection of Nuclear Inspection Criticized

*SK1609035591 Moscow Radio Moscow in Korean
0900 GMT 14 Sep 91*

[Text] Japanese Foreign Minister Nakayama issued a statement at a news conference in Tokyo, denouncing the DPRK for its refusal to sign the agreement with the International Atomic Energy Agency on the inspection of its nuclear facilities. Foreign Minister Nakayama said that as long as Pyongyang maintains this position, Japan will not officially recognize the DPRK.

To remind the listeners, in 1989 the DPRK signed the international Treaty on the Nonproliferation of Nuclear Weapons. The treaty stipulates that any non-nuclear state signing it, if it has facilities involved in the use of nuclear energy, must open them to the international inspectors, and such a state must not attach any condition to the implementation of this inspection.

Regrettably, Pyongyang's attitude is different from this. The DPRK stated last year that it could agree to the inspection of its nuclear facilities only when the United States withdrew its nuclear weapons from South Korea. By this, the DPRK has in mind some 1,000 units of nuclear ammunition believed to be in the possession of the 43,000 U.S. forces in South Korea.

Last spring, expectations surfaced that the DPRK might give up its stand of closely linking the nuclear inspection issue with the U.S. nuclear arms in South Korea. A statement that came from Pyongyang could be interpreted by the international community to mean that North Korea might reconsider its position. However, doubts about this soon arose. A couple of days ago, a DPRK spokesman flatly stated that inspection of the Democratic Republic's nuclear facilities would be possible provided the United States withdraw its nuclear weapons from the southern half of Korea.

It is not difficult to understand Pyongyang's view of U.S. nuclear arms in South Korea. According to a long tradition, Washington neither acknowledges nor denies the existence of nuclear arms in South Korea. Is it proper then for Pyongyang to raise this issue as a condition to fulfilling its duty as stipulated in the treaty? This attitude taken by the DPRK does not help promote its international dignity. Tokyo's reaction substantiates this.

Endorsement of Nuclear Control Pact Viewed

*OW0509105091 Moscow Radio Moscow in Mandarin
1400 GMT 4 Sep 91*

[Commentary by station observer Alekseyev; from the "Current Events and Commentaries" program]

[Text] In his talks with British Prime Minister Major in Beijing on 3 September, Li Peng said that China is prepared to join the international treaty for the nonproliferation of nuclear weapons. Station observer Alekseyev says: It has been 23 years since the treaty was signed. There are 118 signatories to the treaty, whose implementation is guaranteed by three big countries—the USSR, the United States, and the United Kingdom. China had possessed nuclear weapons for four years when the treaty was signed in 1968. The country, however, refused to join the treaty at that time and in subsequent years. The move was not surprising because China was implementing a radical foreign policy, a product of the Cultural Revolution, at that time. All these have long become history. China's current foreign policy is contrary to past developments. The country has consistently advocated the reduction and complete destruction of nuclear weapons. Hence, China's participation in the treaty on nonproliferation of nuclear weapons is a completely natural development.

Under the current circumstances, China's participation is extremely significant to the treaty's guarantors. The nonproliferation of nuclear weapons has become an issue of keen interest all over the world. Experts have said that some countries, including those in Asia, are capable of producing nuclear weapons. China enjoys high prestige in Asia. It can effectively contain the nuclear arms race. The example set by China can help solve the issue of international inspection of the DPRK's nuclear program. Moreover, China's participation in the treaty will enhance Soviet-Chinese understanding and cooperation. This is certainly very important. It goes without saying that China's action will also help improve the country's relations with the West. I think that there is a pressing need for China to take this action.

Allegations on Israeli Nuclear Weapons Program

*91WP0135A Moscow SOVETSKAYA ROSSIYA
in Russian 20 Aug 91 First edition p 3*

[Article by Ye. Korshunov. SOVETSKAYA ROSSIYA publication suspended 22 Aug by decree of RSFSR Pres. Yeltsin, due to paper's support of attempted coup d'état: "A Double Standard: What Mister Matlock Left Unsaid"]

[Text] The television program "Bez retushi" [Untouched] (Russian Television) was being broadcast and its guest was U.S. Ambassador Jack Matlock who has completed his many years of work in our country. Mr. Ambassador was in a very good-natured mood—representatives of the "democratic" press were pleasing him with their views and questions.

Everything was proceeding in a boring and decorous manner as it is supposed to on "Valentine's Day." Mister Matlock's responses were smooth and professionally sincere. But just when the question was asked why it was necessary to place Iraq's nuclear program under international monitoring, but it is not even discussed with regard to Israel's nuclear program, and does Mr. Ambassador also know anything about the fate of Israeli "Dissident" Mordecai Vanunu who exposed Tel-Aviv's nuclear secrets in the autumn of 1988 and who has been sent to jail for 18 years because of this, the speech of Russian television's respected guest immediately lost its smoothness. He did not even answer the first part of the question. He cleverly parried the second question with the statement that he is the ambassador to the USSR and not to Israel.

By the way, maybe Mr. Matlock does not in fact know what is occurring today with Israeli Idealist Vanunu. But he already has long since known about Israel's powerful nuclear potential.

According to a report in the American magazine *TIME*, Tel-Aviv was ready to use 13 atomic bombs against Egypt in October 1973 and they had already even been delivered to the aircraft. The 33rd UN General Assembly session adopted a special resolution that bans the sale of nuclear technology, fissionable materials, and nuclear equipment to Israel. At the 33rd UN General Assembly session, it was stated that the United States and NATO countries are not only cooperating with Israeli experts in the nuclear technology sphere, they are also supplying fissionable materials to Israel.

A Nuclear Energy Commission was established in Israel in 1952, it hired many prominent U.S. and NATO country specialists, and it began to establish nuclear centers like Dimona, Yavne, and Nahal-Sorek. And already in 1970, then Israeli Minister of Defense Moshe Dayan boasted that "Israel has the technology at its disposal to create an atomic bomb."

In September 1986, the London *SUNDAY TIMES*, having painstakingly studied materials, with the help of specialists, given to it by Mordecai Vanunu who had worked at Dimona for nearly 10 years, confidently declared that Israel has entered the "nuclear power club" and occupies sixth place in it. Up to 40 kilograms of plutonium was being produced annually on French equipment (over the course of nearly 20 years) at Dimona by this time. This is adequate for the development of 10 bombs! Naturally, international monitoring was not permitted. I recall that the international inspection that is being conducted today discovered in Iraq a considerably smaller quantity of material that is suitable for the development of nuclear weapons.

In 1986, experts thought that Tel-Aviv already had a minimum of 100 bombs and they allowed for the possibility that Israel has "up to 200 nuclear weapons."

This was preceded by an entire series of notorious international scandals associated with Israeli intelligence

obtaining nuclear materials and the equipment required to work with them. The United States and the NATO countries, who are very well acquainted with Tel-Aviv's corresponding programs, were somehow or other constantly implicated in this.

We all know that FBI Chief Richard Helms prohibited the publication of a report on Israel's nuclear weapons in 1969 and a CIA document stated in 1974: "We think that Israel already has nuclear weapons. Our point of view is based on data about their acquisition—partially through illegal means—of a large quantity of uranium."

For many years, the Western press has widely discussed Israel's nuclear ambitions and the role of the United States and the NATO countries who have actively promoted the satisfaction of these ambitions. This could hardly have passed without the attention of such an experienced and all-round professional as Mr. Matlock.

However, while responding to the question posed to him during the "Bez retushi" program, Mr. Ambassador did not even mention Israel's nuclear weapons but only set forth his country's position in support of nonproliferation of nuclear weapons in a broad context. Meanwhile, we all know that even today Tel-Aviv stubbornly refuses to become a party to the nonproliferation treaty.

Let us note that neither the UN, which has repeatedly discussed the issue on Tel-Aviv's nuclear programs, nor Washington is twisting the Israeli's arm on this. That is, we actually see a double standard: Baghdad is one matter and Tel-Aviv is another.

Churkin Reportage on Chemical Arms Decision

Welcomes Latin America's Decision

*LD0909171491 Moscow TASS in English 1657 GMT
9 Sep 91*

[by TASS diplomatic correspondents Rostislav Gertsev and Sergey Ryabikin]

[Text] Moscow September 9 TASS—The Soviet Union welcomes the decision by Brazil, Argentina and Chile not to produce, not to acquire and not to use chemical and biological weapons, Soviet Foreign Ministry Spokesman Vitaly Churkin told a briefing here today.

He was commenting on the signing by the foreign ministers of three Latin American countries of a joint declaration on the complete ban of chemical and biological weapons.

Of great importance, the Soviet spokesman stressed, is the will expressed by them to work towards the signing of an international convention banning chemical weapons and to be among the first to sign it. This is a timely statement in light of the fact that the work on the convention within the framework of the Geneva disarmament conference has already entered the home stretch.

The Soviet Union for its part, Churkin said, is doing everything in its power to achieve the signing of the convention the soonest possible.

The USSR expresses solidarity with the determination, expressed in the declaration, to help make successful the third conference, at which the convention banning biological weapons will be considered.

On Proposals for Elimination

*LD0909174491 Moscow TASS in English 1736 GMT
9 Sep 91*

[By TASS diplomatic correspondents Rostislav Gertsev and Sergei Ryabikin]

[Text] Moscow September 9 TASS—The Soviet Union intends to come out with new proposals and take an active part in working out new measures at the third conference which has opened in Geneva today to consider a convention to ban the development, production and stock-piling of bacteriological, biological and toxic weapons and eliminate them, Soviet Foreign Ministry spokesman Vitaliy Churkin told a briefing here today.

The third conference will face the task of confirming the convention's effect and strengthening its authority, an urgent need in light of the recent achievements in the fields of biology and biotechnology as well as in connection with the growing threat of proliferation of biological weapons, according to Churkin.

The conference is expected to take important decisions to ensure the effective compliance with provisions of the convention, such as the creation of a special verification mechanism, new measures to build confidence and expand openness of the member-countries and attract all countries to membership in the convention.

Deputy Favors Destroying Nuclear Weapons

*LD0809220591 Kiev Radio Kiev International Service
in Ukrainian 1900 GMT 7 Sep 91*

[Text] In connection with a new political situation that has taken shape around the future union and the development of sovereign states, the issue of the future of nuclear weapons situated on the territory of various republics is being energetically discussed in the Western press. As is known, the Ukraine Supreme Soviet came out in favor of the republic's nonnuclear status a year ago. However, how will the future of the nuclear weapons situated on the republic's territory be settled specifically? Here is the view of Dmytro Pavlychko, the chairman of the Supreme Soviet Commission for Foreign Affairs.

[Pavlychko] We will obviously be discussing two variants. The first one is to put all nuclear weapons at the collective defense body's disposal, i.e. a joint headquarters of armies of independent states that are rising from the present-day republics. In other words, this weaponry should be put under Russia's command. The second

variant is to create an international commission that will come to the Ukraine and register all atomic stations, and the Ukraine, as a member of the United Nations and a nuclear state, will come out with a proposal to completely destroy the weaponry situated on its territory. I tend to think that it is exactly what we should do. We should outlaw this weaponry without taking it anywhere and destroy it where it is located at present. I think that this second option will win. I would not like to anticipate events, but I think that the Ministry of Defense, which is being created, will take this position. Ukraine does not need atomic weaponry, it will have [words indistinct]. Today the talk is about how to get rid of it.

Green Party Wants Nuclear Arsenals Scrapped

*OW0909211191 Moscow INTERFAX in English
1815 GMT 9 Sep 91*

[Transmitted via KYODO]

[Text] The Kiev chapter of the Ukrainian "Green Party" has urged the republic's parliament to immediately adopt a program to scrap the Ukrainian-based nuclear arsenals under the control of international experts.

The "Greens" are also demanding the dismantlement in the Ukraine of all the strategic military bases and super-powerful radar stations, an end to the KGB activity, and the return home of young Ukrainians doing their military service outside the republic.

Tighter Control Over Biological Weapons Sought

*LD1309194291 Moscow TASS in English 0759 GMT
13 Sep 91*

[By TASS correspondent Sergey Sedov]

[Text] Geneva September 13 TASS—Sergey Batsanov, head of the Soviet delegation at the third conference to review the international convention on the prohibition of the development and stockpiling of bacteriological and toxin weapons and on their destruction, which is in session in the Geneva Palace of Nations, made a statement at the conference's regular plenary meeting on Thursday.

The statement says the USSR calls for developing new drastic confidence-building measures and creating more effective mechanisms to verify compliance with the basic provisions of the convention by the signatory states.

Batsanov said the USSR lays immense importance on honoring all international agreements in the disarmament field, including the basic provisions of such an important agreement as the international convention that outlawed this whole class of weapons of mass destruction—germ warfare agents.

Over the five-year period that has passed since the holding of the second review conference, the Soviet Union carried out vigorous work via diplomatic channels with over 50 states, prodding them to join the

convention. Experts say the USSR's purposeful activity largely helped increase the number of states which ratified the convention to 118.

Batsanov also singled out several other directions to shore up the international agreement. He said one of the possible ways was to create reliable guarantees for the fulfillment by all signatory parties without exception of the international convention's provisions. The Soviet delegation fully supports proposals that have already been aired in several speeches that an effective verification mechanism should be created for this purpose.

To this end, Batsanov urged the participants in the conference to take the first step towards establishing a control body and forming a special team of experts to study this problem. In addition, Batsanov put to debate a proposal that a standing group be set up within the structure of the U.N. department on disarmament problems to process information about compliance with the accords already reached in the field of confidence-building measures and openness, which is supplied by the member-countries of the international convention.

Nuclear Plant Construction Program Curtailed

*OW0909222591 Moscow INTERFAX in English
2047 GMT 9 Sep 91*

[Transmitted via KYODO]

[Text] The USSR's program for expanding the nuclear power industry by the year 2000, launched in 1983, will not be carried out. The USSR Nuclear Power Industry Ministry has said that over the past five years not a single nuclear power plant unit began to be built, although the 1983 program set a target of putting into operation about 140 units by the turn of the century. A mere 46 units have gone into operation so far.

One of the main reasons for curtailing nuclear power programs is the public's firm opposition to atomic power plants, which became particularly strong in the wake of the 1986 Chernobyl nuclear power plant disaster, experts said.

Currently, the USSR's 15 nuclear power plants having a total output of 36 million kilowatts accounting for 12.5 percent of the country's electricity production (in the European part of the USSR up to 30 percent).

Reportage on Nuclear Presence in Republic

Chornovil Opposes Removal

*LD0709132991 Kiev Radio Kiev in English 2100 GMT
6 Sep 91*

[Text] Today, at a news conference in Lvov, a contender for Ukrainian president, Vyacheslav Chornovil, chairman of the Lvov regional soviet of people's deputies, came out against the removal of nuclear weapons from Ukraine.

Such was his reaction to the statement by Russia's President Boris Yeltsin about possibly concentrating the entire Soviet nuclear weaponry in Russia. The statement was made by Boris Yeltsin during the live TV space bridge which he, together with the president, Gorbachev, answered the questions of the U.S. public. [sentence as heard]

Supreme Soviet Against Nuclear Presence

*LD0809133591 Kiev Radio Kiev in English 0000 GMT
8 Sep 91*

[Text] In connection with the new political situation about the future union and development of sovereign states, the Western press has started actively debating the issue on the future of the nuclear weapons located on the territory of various republics. As a matter of fact, Ukraine's Supreme Soviet unanimously has spoken out for a non-nuclear status of the Republic last year. So what will be the destiny of the nuclear weaponry which is stationed on Ukraine's territory? Here is an opinion of Dmytro Pavlychko, head of a parliamentary commission for foreign affairs:

[Begin Pavlychko recording in Ukrainian superimposed by report in English] Perhaps we will consider two areas, says Dmytro Pavlychko. The first is the following: to transfer the nuclear weapons under the supervision of the collective defense body, that is, the joint headquarters of the armies of the independent states which are being formed from present-day republics. In other words, these weapons should be transferred under the control of Russia. Second variant is in the following: to create an international commission which should come to Ukraine first to register all nuclear systems. Then Ukraine as a United Nations member and a nuclear power would come out with a proposal about a complete elimination of those weapons which are stationed on its territory. Personally I support just this second idea. We should outlaw those weapons—destroy them right on the spot of their location and not transfer anywhere. I think that this variant will win. I do not want to predict things, but the Ministry of Defense of Ukraine which is being formed in my opinion will take just this stand. Ukraine does not need any nuclear weaponry. It does not want to possess it. The only thing now is to get rid of it, said Dmytro Pavlychko. [end recording]

'Options' for Nuclear Weapons Examined

*PM0509103191 Moscow KOMSOMOLSKAYA PRAVDA
in Russian 4 Sep 91 p 2*

[Andrey Krayniy article under the "Forecast" rubric: "It Seems That We Will Bring Not Only the Peaceful Atom But Also the Atom Bomb into Every Apartment"]

[Text] Our all-Soviet coquetry can rest assured. We are once again the center of the planet's attention. Earnest politicians, inclining their gray-haired, well-groomed heads toward one another, are pondering how to persuade us not to disintegrate. But can you really persuade

us! Freedom! Everything was nobody's—but now it will be ours! Remember: "Those who were nothing...."

And everything would be all right if it were not for the superpower's superweapons, if it were not for what was created by the whole country's exertion, and now the country, as it divides itself up, wants to share out nuclear arms too. Of course, it is tempting: There was a republic—but with an atom bomb, oh, it's a nuclear power! And if a dispute arises with some camp, then.... Precisely, what then? And what, in general, is it proposed to share out? First let us agree on the terminology.

So, the Soviet Union possesses strategic nuclear arms. These weapons consist of their own nuclear ammunition and delivery vehicles. Namely: ICBM's with a range of up to 10,000 km and SLBM's; there were intermediate-range and shorter-range missiles (approximately 3,000 km), but the USSR and the United States have reduced them, and now France alone is left with them; and, finally, strategic aircraft (mainly bombers) armed with free-fall bombs, shorter-range nuclear means (up to 600 km), and cruise missiles (over 600 km). Five states in the world possess such weapons—the Soviet Union, the United States, France, Britain, and China. They are all permanent members of the UN Security Council. Israel, Pakistan, and Iraq are close to possessing nuclear weapons, and guesses alone—do they have weapons already or not yet?—make the world turn cold.

But, in addition to strategic nuclear weapons, there are also tactical ones. These include tactical and operational-tactical missiles, nuclear artillery, and also air-launched tactical nuclear weapons.

The enumeration alone of this whole arsenal is impressive, is it not? But on whose territory is it all?

Strategic offensive arms are based in four union republics—Russia, the Ukraine, Belorussia, and Kazakhstan. As regards tactical nuclear weapons, it is easier to list where there are none. There are none in the Transcaucasus, the Baltic region, or (something that not many people know yet) in Moldova. Nor are there any outside the Union's present borders, whereas there used to be. In the GDR.

This is the disposition. Now let us try to examine the options.

What will happen if the center is no more, and the republics possess nuclear weapons?

First, the club of nuclear powers will at least double in size de facto, because de jure such a proposal will hardly get through the UN Security Council. The spread of the "combat atom" is fraught. The threat to world peace is directly proportional to the number of nuclear powers.

Second, everyone in the world seems to have decided already that there are too many nuclear weapons on this planet. It is necessary to hold talks on their radical reduction. Such talks were held for almost nine years

between the USSR and the United States on the reduction of strategic offensive arms, and that was between just two states! There are only five of them in the world, and these five have never yet been able to sit around a negotiating table. But what if there are 10 of them? Then, in the opinion of Lieutenant General Fedor Ladygin, a leading specialist in the USSR Armed Forces, agreements on the reduction of nuclear weapons will be made extremely difficult, if not impossible.

The security of the weapons proper also must not be forgotten. Measures that would render impossible their unsanctioned use and accidents. For this it is necessary to have a system to ensure nuclear security, a system to control and manage these weapons. But the present union republics simply cannot afford it.

Incidentally, in order to be certain of the reliability of a ballistic missile, it (I exaggerate) must constantly be checked. Nuclear tests are needed on the sites. Where will the Ukraine locate them? In the Crimea? In the Donbass?

There is also the problem of training service personnel, the problem of improving nuclear weapons, etc.

Second option.

What will happen if the center is no more, but there is a Security Council or a Federation Council?

In this case the weapons remain at the center, as it were. Strategic offensive arms are the same for all, and everything is fine, but there is one question: Who, after all, is in charge of the parade? Who is holding the notorious "black suitcase"? Or are there nine suitcases? Or 11? The NATO option comes to mind. In order to use nuclear weapons there, it is necessary to achieve a consensus of all the NATO member countries, including nonnuclear ones. Thank God, a consensus has not been required throughout the past years, there was no need. But if there had been? I have already had occasion to speak about the approach time of missiles from the Norwegian Sea and the Barents Sea. They take between seven and nine minutes to reach our territory. I venture to assure you that West Europe has no more time than that. Of course, in the event of nuclear war commencing, the NATO countries will not have time to consult each other and the decision will be adopted by those that have weapons at hand. But if, instead of the president as the symbol of statehood and the supreme commander in chief, we elect some council (the first word in the proposed combination has no significance now), who will take on the difficult job of making the decision? Having before our eyes the experience accumulated by us of holding congresses and sessions, there is no need to answer.

What will happen if the Union of Sovereign States is led by the center?

And it will be. Obviously, the republic states delegate some powers to it, and these will certainly include the

leadership of strategic offensive arms. Units and sub-units of the Strategic Missile Forces, the Air Force, and the Navy will be directly within these states with the status of "deployment troops [voyska prebyvaniya]." As our Western Group of Forces is now in Germany. And provision will be made in the treaty between the center and the republics for all the questions that might arise. Then all will receive their own (theoretical!) piece of the nuclear pie, and they will be able to assert themselves at sessions of the [USSR] Security Council, where the development strategy will be determined not only for strategic offensive arms but also for the common Armed Forces.

There are more questions than answers. In fact, we do not yet have any professionals in this sphere, for no one even thought that such questions might ever arise. But no one assumed that Russia's historical flag would fly over the Kremlin, did they?

It is necessary to think together, but, in my opinion, it is clear what we must do: Nuclear weapons must be in one pair of hands. Well, in actual fact, the only thing we have been doing all together for 74 years is frighten the world. The community has only just breathed a sigh of relief: "At last they have democracy." But we are again starting up a quarrel with underhand pushing, huffing and puffing, and quiet, constrained exclamations: "Who do you think you are!" in the lobby of the civilized world.

Of course, many of us (we do not even suspect how many!) are deeply nostalgic for the superpower. For this thought would console us during the hardest minutes. Nuclear parity accounted for the shortage of the most vital things, and our hearts, despite the meager food, swelled with legitimate pride—but then we make missiles. Of course, it is sad to part with the thought that you live in the greatest and v-very strong country. True, I too am sad. But, after all, a great country is not the one that has more missiles... Missiles mean prowess and titanic labor, but then there is something higher than prowess.

...It is also sad to part. Be that as it may: We have gotten used to one other or, at least, accustomed to one another. Maybe, in constructing a communal apartment, we will not drag in after ourselves our common bombs? Maybe we will sit down on the threshold, on the path, and will think a bit?

Lobov, Velikhov on Nuclear Arms Security
91WC0161A Moscow *RABOCHAYA TRIBUNA*
in Russian 31 Aug 91 pp 1, 3

[Article by V. Ostrovskiy: "Should We Be Worried About the USSR's Nuclear Weapons?"]

[Excerpt] The Western mass media have repeatedly brought up the following problem: Who will get the nuclear weapons in the event of the collapse of the Soviet Union, and how many new nuclear states will arise in place of the USSR? Undoubtedly this problem could become the subject of debate and reflection of idle

people on a hypothetical level. But we should ask the Western mass media who has informed them that the president of the USSR has stopped being the commander in chief of the country's Armed Forces and where they learned that he has lost control over the country's nuclear potential.

How do General of the Army V. Lobov, chief of general staff of the USSR Armed Forces, and Academician Ye. Velikhov, leader of the USSR's thermonuclear program and USSR people's deputy, see this problem?

General of the Army Vladimir Lobov, chief of general staff of the USSR Armed Forces:

Nuclear missile weapons in our country are under the strictest and most rigorous control. It is part and parcel of the very system of administration of these weapons.

The security of nuclear warheads during storage, transportation, and existence on alert status is guaranteed by a multistep system of control which consists not only of technical but also of biophysical principles. The process of oversight is such, said General Lobov, that a chain of controlling elements functions at each state of the upkeep of a nuclear weapon. The control mechanism is such an integral part that it absolutely excludes any possibility of any kind of mistake. The chief of general staff of the USSR Armed Forces categorically rejected any possibility of nuclear blackmail in the event of the theft of the codes.

Both strategic and tactical nuclear weapons are reliably controlled by the appropriate services of the USSR Armed Forces. General V. Lobov said that the Soviet military command authorities understand all the depth of the anxiety of the international community at the problem of the condition of the nuclear potential and the reliability of its control by the state. We have received requests by scholars to examine this problem, said the general. I believe that a discussion of this problem by Soviet scholars may serve as a new impulse first and foremost for halting the nuclear tests of the United States and the USSR, which may lead to a halt in the development of new nuclear weapons systems. Such a step by both powers could contribute to a decline in the numbers of nuclear arms in the world. [passage omitted]

Colonel Denies Nuclear Weapons Near Tartu
OW3108170191 Moscow *BALTFAX* in English
1530 GMT 31 Aug 91

[Transmitted via KYODO]

[Text] In an interview with the Tartu newspaper "Postimees" colonel Valeriy Yanin, commander of a strategic long-range bombers division stationed near the Estonian city of Tartu, denied the assertion of academic Mikhail Bronstein, a deputy representing Estonia, who had spoken before the USSR Supreme Soviet's session Wednesday, that strategic bombers and nuclear weapons are stationed at an airfield in the suburbs of Tartu.

Colonel Yanin pointed out that there are no nuclear arms in or around Tartu. Colonel Yanin argues that since the end of the "cold war", not a single bomber carrying nuclear weapons has taken off in the USSR.

Defense Minister on Nuclear Weapons Control

*LD2908143791 London BBC Television Network
in English 2130 GMT 28 Aug 91*

[Interview with General Konstantin Kobets, Russian Soviet Socialist Federated Republic defense minister, by correspondent Mark Urban in Moscow on 28 August on the "Newsnight" program—recorded]

[Excerpts] [Kobets] In our opinion it must be a committee of the Defense Ministry that will unite all the representatives, or ministers of defense, of all the republics, giving them equal rights—thus resolving this question. The main issue is that we should keep centralized control of our strategic nuclear forces and not divide them up among the republics. [passage omitted]

I think that nuclear forces will remain centralized for a long time. For the moment, all republics will agree to this and, of course, they will control them—meaning civil control. This should prevent any use without permission. [passage omitted]

International Monitoring of Nuclear Arms Urged

*PM0309130991 Moscow Russian Television Network
in Russian 1700 GMT 29 Aug 91*

[From the "Vesti" newscast: Report over video read by announcer]

[Text] Today, the fate of Soviet nuclear forces is the focus of attention for political observers and the media. The Soviet Union possesses a massive nuclear arsenal.

The country has approximately 30,000 nuclear warheads in its arsenal, and the vast majority of launchers of nuclear-equipped ballistic missiles are located on Russian Federation territory. But hundreds of missiles are located outside its borders, notably in the republics which have already declared their independence from the USSR. Given the internal instability and the accelerating disintegration process and breakup of the Union, a whole range of questions arises: Who will control this nuclear monster? Who has his finger on the launching button? In the event of USSR Armed Forces' being broken up into independent republic armies, what fate awaits the nuclear weapons? Finally, are there any security guarantees? In the opinion of USSR Presidential Adviser Yevgeniy Velikhov, the Supreme Soviet should hold an independent inquiry into the state of the Soviet nuclear arsenal. The academician suggests setting up a special international organ to monitor USSR nuclear weapons.

Lvov Region Wants Nuclear Arms In Ukraine

*OW0709142891 Moscow INTERFAX in English
1325 GMT 7 Sep 91*

[Following item transmitted via KYODO]

[Text] Chairman of the Lvov Regional Council of People's Deputies Vyacheslav Chernovil is firmly against the movement of nuclear weapons from the Ukraine. Speaking in Lvov on Saturday, he declared that he "would take very effort" to prevent Russia from carrying out this action.

Chernovil criticized Yeltsin's statement that all nuclear weapons could be moved to Russia. Yeltsin had spoken Friday at a TV link organized by U.S. TV companies.

FRANCE

Company To Supply Nuclear Equipment to USSR

LD1409041191 Paris France-Inter Radio Network
in French 1200 GMT 13 Sep 91

[Text] Framatome, the French builder of nuclear reactors, has just signed a contract worth 16 million francs with the USSR to supply equipment for nuclear power stations. The contract will enter into force when the financial details have been finalized. Framatome has not announced a date.

Nation Not To Impede Nuclear Arms Reductions

PM1309083191 Paris LE MONDE in French
11 Sep 91 p 4

[Unattributed report under the "Diplomacy" rubric: "Joxe Reassures Germans on Deployment of Hades Nuclear Missiles in France"]

[Excerpts] While addressing his German counterpart Gerhard Stoltenberg in Paris on Monday 9 September French Defense Minister Pierre Joxe talked about the prospect of reducing tactical nuclear weapons in Europe (LE MONDE, 10 September) and stated that "France will not have its foot on the brakes if there is a large-scale global move toward disarmament."

Mr. Joxe added: "The kind of military threat that we have known for several decades is in the process of disappearing as the ideology which was its driving force has collapsed and been discredited. Europe has an historic opportunity to make progress along the road toward disarmament (...). A drastic reduction in nuclear arsenals—beginning with short-range nuclear weapons—may be one of the objectives in this new era of disarmament" in the world.

U.S. Defense Secretary Dick Cheney already let it be understood last week that the Atlantic alliance could contemplate reducing its short-range nuclear weapons in Europe during next October's meeting of the Nuclear Planning Group in Brussels, and again at the NATO summit scheduled for November in Rome. By asserting that "France will not have its foot on the brakes" in this sphere, the French defense minister undoubtedly sought to allay fears which emerged recently in Germany following the announcement (LE MONDE, 26 July) about creating a Hades Nuclear Missile Unit based in two regiments stationed in the Marne and the Aube regions. [passage omitted]

Mr. Stoltenberg noted: "First the two superpowers must reach agreement on ground-launched short-range nuclear missiles." If an agreement were reached "I could envisage talks with our French friends on developing Europe's nuclear strategy," the German minister added, and he concluded that in such a context "France could review its positions."

GERMANY

Interatom Allegedly Aided Iraq Nuclear Program

LD1409082991 Hamburg DPA in German 0140 GMT
14 Sep 91

[Excerpt] Hamburg (DPA)—Interatom, a Siemens subsidiary, is reported to have helped Iraq build up its nuclear production. This is reported in the latest edition of DER SPIEGEL. The magazine quotes the concluding report of a U.N. commission stating that a nuclear complex has been established south of Baghdad in which plants for uranium enrichment are to be built.

The complex includes a factory with the abbreviation B01. Interatom made extensive deliveries to Iraq last year under the project designation B01. According to U.N. information, around 100 centrifuges for uranium enrichment are to be installed in the factory by mid-1993. At the end of last year DER SPIEGEL accused Interatom of helping Iraq in its nuclear program. The firm has strongly denied the allegation.

Interatom Said To Aid Iraqi Nuclear Program

AU1609153491 Hamburg DER SPIEGEL in German
16 Sep 91 pp 131-134

[Unattributed report: "Unexpected Side Effect"]

[Text] The search for nuclear installations in Iraq was a laborious task for the UN experts. During days they would be stalled, they were often misled, and even threatened with arms.

In the end, the delegation discovered something near Jussifiya [spelling as published], a place 20 km south of Baghdad. The fourth team of inspectors, which visited Iraq between 27 July and 10 August, discovered an absolutely undamaged plant, whose existence had so far been absolutely unknown to the allies.

In four workshops the material for a nuclear bomb was to be processed there. Even after the war, the al-Furat project was treated with strict confidence. Saddam's people were trying hard to protect the foreigners who helped construct the plant.

Before the UN experts arrived, the Iraqis had obliterated all names of producers and serial numbers. Still, they were not able to erase everything. Official abbreviations such as B01 or B00 have provided clues about the suppliers, which include the FRG.

In 1990, Interatom, a Siemens subsidiary of Bergisch-Gladbach, under the project designation "Central-Workshop B01" shipped a plant on 60 trucks to Iraq which, according to the official version, was the workshop for pipeline systems. Pipes for the "food and pharmaceutical industry and for the petrochemical industry" were allegedly to be further processed there.

The manager reacted calmly to any skeptical question. Last year, Interatom representatives stated that "while the offer was made and the order dealt with" there has never been any "indication about a use for military purposes.

This version is no longer credible. According to a secret report, which was submitted to the UN Security Council, the B01 workshop constituted the center piece of Saddam's production plant for centrifuges. In the B01 workshop, which is 80 meters long and 40 meters wide, the cylindrical rotors, which are operated in a vacuum, were to be fitted. At high rotational speed such rotors separate the various uranium isotopes. B01 was obviously also intended to be the location for the first 100 centrifuges.

The plants that were examined by the UN inspectors show components and construction features of various German ultra-gas centrifuges. Apart from the MAN concern, Interatom is the second important specialist in this field. Both companies are involved in the Urenco uranium enrichment plant, which is jointly operated by the Netherlands, United Kingdom, and Germany.

In the seventies blueprints of the Urenco plant disappeared at the production site in Almelo, Netherlands. German managers had arranged for these blueprints to be conveyed to Pakistan, where they helped develop nuclear technology.

Initially, these documents might also have helped Iraq. Consequently, support increased and, according to the United Nations, it clearly came from the West.

Regardless of how big Interatom's contribution was, the Siemens manager and the state authorities have worked very hard indeed to suppress the entire affair. When in issue number 52/1990, DER SPIEGEL published the first details about the nuclear aid, Interatom denied almost everything.

In the late eighties, the enterprise of Bergisch-Gladbach trained 22 Iraqi engineers and experts. They were also provided with the appropriate nuclear literature.

Other appliances, such as helium leak detectors and vacuum pumps, which experts consider to be clear evidence, were described as harmless devices by the managers of Interatom. According to them, these were nothing but "standard devices for leak tests and for filling pipes."

Experts became suspicious because the Iraqis attached so much importance to information about "desublimation in the danger area." Interatom even arranged for informative talks between "a friendly German construction company for chemical plants."

During desublimation, uranium hexa-fluoride is converted from the gaseous to solid condition at minus 70 degrees and collected in receptacles. Interatom said this meant nothing, and that such a process is typical of "many chemical process," and is described "in any good chemical textbook."

UN nuclear experts take a less generous view on that issue. In their report, they expressly point out that experiments using uranium hexa-fluoride were obviously carried out in B01.

Some small-scale firms may have been deceived by Iraqi customers. However, managers who are at home in international transactions cannot be as naive as Interatom pretends to be.

Actually, one can assume that they are not that naive.

What is striking is that a lot of mystery mongering was going on in connection with the plant. The Cologne-based Strabag construction company, which was commissioned by Interatom to do all the planning work, was initially given papers that had all the names of the owner of the site of the location written illegibly. Strabag managers later said that, apparently, Interatom wanted to withhold any background information in connection with B01 from them. They were given original documents only after strong demands.

Interatom had aroused an international stir before, as early as December 1990. However, critical fiscal auditors were stopped. Although a mere initial suspicion is sufficient to initiate preliminary investigations, they did not take place.

To this day the company continues to deny that it ever imparted expert knowledge in the area of uranium enrichment to the Iraqis. However, there is increasing evidence of German involvement in Saddam Husayn's nuclear program.

Meanwhile, more nuclear plants have been discovered in Iraq. In Tarmiyah, north of Baghdad, Iraq set up a plant that is even more complex than the one at Jussifija. The process applied here does not use centrifuges to produce the material for the bomb, but applies electromagnetic separation technology.

According to a report in the Austrian weekly PROFIL, it was intended to have the Tarmiyah plant operating at full capacity within one and a half to three years. Then Saddam would have been able to produce one bomb every 18 months. This process must have cost Iraq at least \$3 billion, about one billion more than what it spend on the centrifugal technology.

The work of the UN inspectors has an unexpected side effect. Both, producers and suppliers must fear that their Iraq deals will be exposed.

Yet one important question remains unanswered. "We have not yet met the person who managed the program," chief inspector David Kay said.

Genscher Wants Nuclear Arms Removed

LD0109154791 Berlin ADN in German 1509 GMT
1 Sep 91

[Text] Mainz (ADN)—Regarding events in the USSR, Foreign Minister Hans-Dietrich Genscher described as urgent a Western initiative "which would get rid of nuclear short-range weapons and nuclear artillery munition at once and everywhere." Such weapons no longer have any significance. "If they ever had one, the time has now come to free the world from nuclear artillery munition and short-range weapons," Genscher said today in an interview with ZDF's (Second German Television) "Bonn Direkt" program (to be broadcast at 1910).

The Federal Republic of Germany has an interest in the USSR not disintegrating completely. It will respect the sovereignty of the individual republics completely. "If they maintain a loose association or build a confederation, that is primarily a decision for the republics," he said. It is important that this does not

Genscher on Nuclear Disarmament, Aid for USSR

LD0509153191 Berlin ADN in German 1447 GMT
5 Sep 91

[Excerpt] Dresden (ADN)—Foreign Minister Hans-Dietrich Genscher (Free Democratic Party) has demanded a Western initiative for swift worldwide elimination of nuclear short-range missiles and nuclear artillery. In an article for the SAECHSISCHE ZEITUNG (Friday edition) Genscher advocates a review of security structures in Europe in view of the changes in the Soviet Union. "In the sphere of conventional weapons too, new disarmament steps could contribute to a reduction in the dangers." [passage omitted]

Genscher Against Short-Range Nuclear Weapons

LD1309144391 Berlin ADN in German 1053 GMT
13 Sep 91

[Text] Bonn (ADN)—Federal Foreign Minister Hans-Dietrich Genscher once again demonstrated his support for the swift and international destruction of short-range nuclear weapons and nuclear artillery. Their military purpose has always been controversial, Genscher told NORDSEE ZEITUNG (Saturday edition). The forthcoming Soviet military reform gives conventional and nuclear disarmament a new, unique opportunity.

The Free Democratic Party politician stresses that Germany is particularly interested since Western short-range nuclear weapons and nuclear artillery are stationed on its territory. In the Western alliance, "our demand for abolishing nuclear short-range weapons is winning ground," Genscher said. The foreign minister described a second conventional agreement that would urgently reduce personnel. Germany offered an example with cuts in the Bundeswehr to 370,000 men. Others must now follow suit.

Aid Said Given To Build Libyan Missile Factory

LD0509145291 Hamburg DPA in German 1403 GMT
5 Sep 91

[Text] Cologne (DPA)—According to information from today's RTL Plus morning magazine program, German technicians and scientists are said to have built a missile factory in Libya. A missile named "Al Fatah" with a range of 1,000 km is reportedly to be built in the factory, located 130 km from the capital, Tripoli. The parts for the missile were shipped from Bremerhaven eight weeks ago, the program added in response to a question. The shipping papers referred to water and drainage pipes. A Middle Eastern secret service has taken aerial pictures of the factory.

The program also reports that German firms were also involved in the production in Iraq of Scud missiles based on the North Korean model.

A spokeswoman for the Federal Economics Ministry stated in Bonn in response to an inquiry that so far they had no knowledge of this. It will be investigated whether the station's information is true and missile parts were shipped from Bremerhaven as water and sewage pipes.

Wismut Uranium Mine Contamination Revealed

91GE0430A Hamburg DER SPIEGEL in German
Vol 45, No 34, 19 Aug 91 pp 58-64

[Unattributed article: "Yellow Cakes From Saxony"]

[Text] This summer white flags with the inscription, "New Thinking—New Action," are waving in front of the main building of the Wismut AG uranium ore company in Chemnitz, Saxony.

That will certainly be called for because the Soviet-German Wismut Ltd (SDAG) of which Economics Minister Juergen Moellemann (FDP [Free Democratic Party]) recently assumed full ownership from Moscow is responsible for one of the greatest ecological catastrophes in Europe.

Where the raw material for the Soviet nuclear bomb program was once mined, radioactive radon is escaping into the environment from 3,500 mountains of slag, 15 muddy containment tanks and 2,500 kilometers of subterranean uranium mine shafts running from Gera to Koenigstein. Experts estimate that 10,400 square kilometers of soil—an area four times the size of the Saarland—are contaminated.

An area in which some two million people live in southeastern Germany is endangered, if not already radioactive. Klaus Toepfer (CDU [Christian Democratic Union]), the German minister for environment, was appalled when he visited the disaster area last March. "It is totally incredible," he said.

Incredible perhaps—but true. In an interim report, the government Commission for Radiation Protection, a

division of the Environment Ministry, has documented "the results of a data review" for the first time ever. The report provides evidence of previously unknown health problems among the company's staff.

Among other things, the experts seized a confidential file labeled "occupational illness—bronchial carcinoma" (BK 92). According to information contained in the file, 9,000 uranium miners were diagnosed as having contracted "lung or bronchial cancer" until 1990—probably caused by radon.

SDAG has now been forced to admit that 160 former miners are diagnosed as "new cases of lung cancer each year." The experts say that in all there are more cases of cancer caused by radiation in the southern areas of the former GDR among members of the Wismut staff alone than among the survivors of Hiroshima and Nagasaki, the two Japanese cities subjected to American nuclear bombardment in 1945.

The diagnoses of the Wismut medical staff on classic lung diseases were kept secret for decades. Since 1952, the doctors found 15,000 cases of pneumoconiosis in 260,000 mass X-ray examinations. Six thousand more miners are "suspected" to be suffering from silicosis.

The pneumoconiosis file contains no information on how many deaths resulted from inhaling uranium dust but it does contain comprehensive "post mortem findings" from autopsies.

Werner Schuettmann, 77, an East Berlin doctor of internal medicine and an industrial health expert, says that the truth about the human victims of the GDR uranium mining program which was kept secret for 40 years shows how reckless the operation was. All customary safety precautions were "grossly neglected," says Schuettmann who dealt with the radon victims from Saxony and Thuringia both at the Karlshorst Clinic and as a member of the GDR radiation protection commission since 1961.

In the fifties, for example, SDAG Wismut sent tens of thousands of miners down into the shafts without protective gear. Initially, even women had to work underground in heavily radon-contaminated areas. These high-risk workers received privileged treatment in the distribution of food and consumer goods. Warnings by concerned GDR physicians and mining experts went unheeded by SDAG Wismut at that time.

The reason being that the company was engaged in fulfilling a mission of world political importance with insufficient means, i.e. the Saxon uranium mines were charged with mining the raw material for the Soviet nuclear bomb industry. Since the end of World War II SDAG Wismut produced some 220,000 tons of concentrated uranium—known as yellow cakes—from huge quantities of uranium ore.

The Soviet Union was already making use of the yellow cakes from Saxony when it conducted its initial nuclear

tests in 1949. At the "armory of socialism," as it was called by the SED [Socialist Unity Party of Germany] propagandists, GDR experts produced the materials for the warheads of the nuclear missiles which Soviet armed forces deployed in the GDR. But the plant also produced uranium for the fuel elements of the GDR nuclear reactors at Greifswald and Rheinsberg.

The health risks for the population of the area was kept secret by the Wismut plant operators. The former State Office for Nuclear Safety and Radiation Protection (SAAS) of the GDR did conduct wide-ranging "area surveillance" as early as the eighties. Wismut geologists even used helicopters to determine radiation from new uranium ore fields on the ground some of which was greater than that following the Chernobyl disaster in the Soviet Union in 1986.

But according to Walter Roehnsch, 62, a former SAAS expert, the East German radiation observers were unable to come up with solid findings because of the military nature of the "facility." Roehnsch, now with the Berlin branch office of the Federal Office for Radiation Protection, cautions against exaggerating the dangers. "Nobody is going to drop dead just by walking around the area," he says.

That is a small consolation for the inhabitants of the villages in the "Uranobyl" area, as it was called in the Bonn Energy Report. The 370 inhabitants of the village of Oberrothenbach, for example, are told in an informal "health advisory" not to eat their homegrown carrots or tomatoes. At the foot of the uranium dump in Crossen, radon levels are 150 becquerels per cubic meter or almost 20 times higher than normal levels in West Germany.

In the houses of the historic mining region of the Erz Mountains radon levels are higher than anywhere on earth. Levels up to 100,000 becquerels have been measured at Schneeberg. Minister Toepfer recently appeared on television climbing into a basement pit which spewed uranium gas into the interior of a local building.

The radiation protection commission calls for "rehabilitation measures" even at a level of 250 becquerels. The ministry for the environment made 6 million German marks [DM] available to Schneeberg for repair work on the radon-infested buildings.

The experts disagree on whether there is a direct link between radon levels and the incidence of cancer. The chain of cause and effect is particularly difficult to trace because cancer caused by the waste products of radon 222 which affect the human lung in the form of alpha rays does not become active until approximately 35 years after exposure.

Because of this long interval scientists are not at all comforted by the fact that GDR experts did not determine marked increases in average cancer death rates of 209 per 100,000 inhabitants in the uranium region in the eighties. What is more, epidemiologists at the central

cancer registry of the former GDR in Berlin say that these findings are not reliable in view of the fact that many illnesses in the vicinity of the uranium mines were hushed up for political reasons.

The evaluation of the cancer registry which lists more than 2.1 million cancer patients since 1953 also runs into legal difficulties. At this juncture, German data protection laws do not permit the creation or use of such patient data bases.

Conversely, the medical profession which might now gain access to the most comprehensive cancer registry in the world in terms of demographics sees a chance for unprecedented research projects. The Wismut example combined with comparison examinations might provide an empirical answer for the first time in medical history to the question of whether nutrition habits, smoking, or natural sources of radiation contribute to the incidence of cancer. Spiros Simitis, 56, the recently retired Hesse data protection expert, says he can sense a "new gold-rush mentality" emerging among the medical statisticians.

But according to the experts in the environmental ministry there is no further need for statistical analysis. They say steps must be taken immediately to bring the radiation threat under control.

The question is how. Both in the unification treaty and the agreement on Wismut the Bonn government turned down Soviet participation in the cleanup. In the meanwhile, however, the estimated cleanup costs have jumped from DM5 billion to DM15 billion—or DM10 per square meter of contaminated soil.

Canadian and Australian uranium experts have already had a look at what once was the third-largest uranium-producing region in the world. A cleanup project of this magnitude has never before been attempted. For the special purpose of devising potential technologies, Wismut AG and the French nuclear firm of Cogema have formed a decontamination, cleanup, and recultivation company.

"We are all astonished at the magnitude of uranium production in the former GDR," says Wolfgang Kersting, the general manager of Interuran, Saarbruecken. Western cleanup experts have thus far only been able to work on relatively small, inactive uranium mines in the Fichtel Mountains of Upper Franconia or the Black Forest.

"Why should we repeat the mistakes which others have already overcome," says Klaus Martignoni, an expert at the Office for Radiation Protection. To analyze the data from Wismut, the experts are calling for an "international Wismut hearing" with the participation of scientific critics such as took part in the Gorleben hearing at Hannover in 1979 on the storage of nuclear waste. The Bonn Environment Ministry, which is responsible for radiation protection, views such a Wismut hearing "with favor."

Wismut AG would like to see the radioactive waste put back where it came from, i.e. underground. About 6

million cubic meters of decontaminated rubble and scrap material from the dismantled plant buildings could be sunk into underground silos. The cleanup experts would like to dump the cone-shaped piles of uranium ore which can be seen from faraway into the Lichtenberg strip mining pit near Ronneburg in Thuringia. The pit which is 140 meters deep could provide space for 80 million cubic meters of uranium material. "That is our preferred option," says Wismut spokesman Johannes Boettcher.

There is not only a great deal of opposition among the population to the cleanup plan which is to be made public in Bonn in early September. The Oeko Institute in Darmstadt has analyzed the weak points of the underground project on behalf of the environmental organization, Greenpeace. Test drillings have uncovered "geological danger zones" at the edge of the mud lakes.

Uncontrollable water seepage poses the threat of "large-scale leaching" of radioactive material which will still be radioactive in 1,600 years. The poisonous arsenic levels in the Wismut lakes would be sufficient in themselves to poison all of Europe. For all that, water seepage is by no means inconceivable. If water levels which are artificially lowered underground at present were to rise, the mine shafts and pits would be flooded.

For the sake of comparison the Darmstadt scientists drew on the cleanup rules established by U.S. environmental protection authorities following their experiences with deactivated uranium mines in Utah, New Mexico, and Arizona. According to these regulations the Wismut project would not be licensed to operate. U.S. operators, for example, must submit a "certificate of impermeability" for at least 200 years. But even secure encapsulation would not do away with the problems at Wismut in view of the fact that materials for the construction of houses and roads were removed from the Wismut dumps in years past. As in the case of the contaminated red gravel used on West German sport fields and play grounds, no one knows where the radioactive materials were used.

Environmental investigators recently struck paydirt at the Hermsdorf interchange south of Leipzig where an entire freight train full of Wismut waste material was used to build the foundation of an Autobahn segment.

NETHERLANDS

Ter Beek Urges Tactical Nuclear Arms Accord
*PM1709105691 Rotterdam NRC HANDELSBLAD
in Dutch 4 Sep 91 p 3*

[Willebrord Nieuwenhuis report: "Ter Beek Wants Swift Accord on Tactical Nuclear Arms"]

[Text] The Hague, 4 Sep—The most recent developments in the Soviet Union present us with a opportunity to get rid of short-range (up to 500 km) nuclear arms as

quickly as possible. Independence for the republics in the Soviet Union must not lead to the spread of nuclear arms.

According to Defense Minister Ter Beek, it has become abundantly clear in the last few weeks that short-range nuclear arms are now superfluous. He wants the upheavals in Soviet political life to be exploited. Current developments once again underline—after the unification of Germany and the withdrawal of Soviet troops from Eastern Europe—the purely political role of nuclear arms. If foreign and defense policy are the preserve of the Union—an idea to which a number of republican leaders have already subscribed—and this arrangement becomes a reality, then business could quickly be done with the Soviet Union, according to Ter Beek.

“I still have to be convinced of the advantages of a fully negotiated treaty in the traditional sense on short-range nuclear arms, although I am not against one. A treaty always gives rise to major verification problems. As far as I am concerned, things can move more quickly. Total abolition is to the advantage of very many people.”

He sees greater advantages in a political agreement with the Soviet Union in which short-range nuclear arms close to the Soviet Union's borders are removed and a number of systems destroyed. Once again there must be commitments on both sides.

Finalizing a treaty takes much longer. Ter Beek is also unwilling to rule out the possibility of unilaterally renouncing short-range weapons “given the fact that the security policy significance of these weapons is extremely small.” This unilateral withdrawal or destruction cannot happen without the involvement of our allies, but must be the product of consultations. Ter Beek hopes that the NATO summit in Rome in early November will reach a decision on a more rapid abolition of land-based short-range nuclear arms.

Finally, the West must reach an agreement with the Soviet Union on a minimum level of nuclear deterrence. In Ter Beek's view, the West must not reach an isolated decision about new missiles on board aircraft and ships (TASM, tactical air to surface missiles). It must be part

of a total package of nuclear deterrence at as low a level as possible. In the future nuclear weapons must be “truly weapons of last resort” [quoted words in English]: a final, always political tool.

Ter Beek considers that new nuclear missiles on board aircraft and ships are needed to maintain Europe's security relationship with the United States. The Netherlands will not abolish the nuclear role of its F16 combat aircraft. In arriving at a minimum level of nuclear deterrence the French and British nuclear arms can no longer be left aside in talks with the Soviet Union.

Ter Beek is convinced that the right of veto over the use of nuclear arms that Russian President Yeltsin has demanded is an additional guarantee of security. “It puts an additional key into the chain of command.” He expects the Soviet Union to adhere to the treaties it has entered into on strategic arms reductions (START). It is important that the START treaty is ratified as soon as possible and that compliance with the treaty is monitored.

Ter Beek finds the fact that a number of republics want to become nuclear-free “reasonably reassuring.” According to Ter Beek, if a number of republics in the Soviet Union were to have at their disposal short-range nuclear arms (range in the Soviet Union between 18 and 300 km), the direct security risk to the West is small. “However, in the internal conflict in the Soviet Union, particularly if territorial claims play a role, the possession of tactical nuclear arms could provide an additional means of applying pressure. But the security of the West will not be directly threatened.”

The fact that Soviet divisions consist largely of men and officers who are not natives of the republics in which they are stationed (apart from in Russia) provides an additional guarantee that the decision on the use of nuclear arms is in the hands of the central leadership and the general staff. “So far I have not heard that republics want to have their own nuclear arms. I do not see any eagerness for this on their part. But if such eagerness does arise we must of course oppose such proliferation. And of course the Soviet Union has already signed the nonproliferation agreement and it does adhere to it.”

Woerner Welcomes Nuclear Arms Proposals

*LD1209081991 Hamburg DPA in German 0658 GMT
12 Sep 91*

[Text] Hamburg (DPA)—NATO Secretary-General Manfred Woerner has reacted positively to the proposal by Russian President Boris Yeltsin that short-range nuclear weapons and nuclear artillery should be swiftly scrapped without long negotiations. For him there is no doubt "that nuclear artillery and land-based Soviet and U.S. short-range missiles will disappear from Europe," Woerner said in an interview on Deutschlandfunk today.

At present there are discussions about whether this should happen unilaterally, whether a certain agreement should be reached, or whether there should be negotiations on it. Woerner expressed confidence that under reform-oriented forces such as Yeltsin's, disarmament agreements could be made more quickly than hitherto. Woerner said of President Mitterrand's proposal on Wednesday of a UN intervention force in the Yugoslav crisis that NATO could certainly support the involvement of the United Nations.

Iraqi at Biological Arms Session Urges Ban

*JN1309135591 Baghdad INA in Arabic 1249 GMT
13 Sep 91*

[Text] Geneva, 13 Sep (INA)—Iraq has stressed the importance of all nations signing the agreement banning the use, production, and stockpiling of biological weapons and providing for their destruction. It also called for all countries, without exception, to be bound by the system of verification provided for in the agreement.

The remarks were made by Dr. 'Abd-al-Mun'im al-Qadi, Iraq's chief delegate to the third review conference of the signatories of the agreement, which opened in Geneva last Monday and is due to wind up on 27 September.

He underscored the need to stay away from double standards in the application of the agreement, and warned that such an approach would undermine the agreement and international credibility. It would also

upset the international balance and reflect negatively on global stability and security.

It is vital that there be no distinction between weapons of mass destruction—nuclear, chemical, or biological, he added.

Dr. al-Qadi urged the international community to apply a single standard so that inspection teams would check on the possession of biological weapons and pursue effective procedures to monitor compliance with the agreement and the peaceful use of biological technology.

Refuting allegations from the Senegalese representative of Iraqi breaches of the agreement, the Iraqi delegate declared that Iraq has not been shown to have been guilty of a single violation during the Atlantic-Zionist [as received] aggression. If anything, he noted, it was the United States and its allies that used internationally banned weapons against Iraqi forces, and he cited napalm and phosphoric bombs.

In a rebuttal to a similar charge from the U.S. delegation, the Iraqi representative cited Iraq's cooperation with the biological inspection team during its visit to Iraq on 2 August. Iraq provided all the clarifications sought by the UN team to supplement the information it had supplied through correspondence, Dr. al-Qadi noted.

On the level of cooperation Iraq extended to the UN inspection team, he cited remarks made 2 August by the UN secretary general regarding its mission in Iraq. The UN chief quoted the head of the inspection team as saying that Iraqi authorities had shown excellent cooperation with the team.

Iraq had given legal shape to its position by placing the document bearing its signature to the agreement banning the use and stockpiling of biological weaponry. [sentence as received]

The Iraqi representative reiterated Iraq's unconditional commitment to the provisions of the Geneva Protocol banning the use in war of choking, poisonous, or other such gases in bacteriological warfare, signed in Geneva in 1925, and which the Zionist entity continues to refuse to sign or ratify, although it enjoys an observer status at the proceedings of the conference.